

VANCIALTIMES

Tuesday August 26 1980

Polish workers stay

out despite offers

Hardline Communists io West Berlio warned that

the shipyard workers were trying to destroy the "socialist foundations" of Poland end remove it from

Troops from Czechoslovakia and Bulgaria bave

arrived in East Germany for a pre-arranged Warsaw

Pact exercise, involving 40,000 men. Page 2

EXPERIENCE, EXPERTISE, ANDTEAMWORK IN CONSTRUCTION. TAYLOR WOODROW

GENERAL

Jobless figure storm likely

Ministers are bracing them-selves for furions reaction to the latest unemployment figures tn be published tnmorrow. They are certain to nudge if not pass the 2m mark.
Mr. Micbael Foot, Labour

Party deputy leader, confirmed that the Opposition is prepar-ing for a campaign to recall Parliament to discuss " the moat serious industrial crisis the country has known for genera-

Demands for a change in ecocomic strategy will be intensified when the TUC meets to Brighton next week. Back Page; Youth unemployment, Page 4

Anderson choice

Independent presidential candidate John Anderson named former Wisconsin governor Patrick Lucey as his vicepresidential running mate, Mr. Luccy is a liberal Democrat closely linked to the Kennedys.

Priest on trial

Russian Orthodox priest Gleb Yakunin went on trial in Moscow charged with distributing documents aimed at under-mining Soviet authority.

Hostages moved

Some of the U.S. hostages in Iran have heeo moved to secret locations because claim their student captors, Washington plans a further rescue attempt before the U.S. presidential

Bribery fine

Bethlehem Steel Corporation, America's second largest steel company, was fined \$325,000 (£137,362) 10r pribing sail owners' representatives to send ships for repair to its eight

Minister sacked

China's Petroleum Minister Song Zhenming has been sacked over the sinking of an oil rig last year which killed 72 people. Kang Shien, vice-premier in charge of the nil industry, has been severely reprimanded

Carrington visit Foreign Secretary Lord Carringtoo started a three-day visit to

Saudi Arabia. Diplomatic rela-tions with the UK were resumed three weeks ago.

Restriction eased

Requeats for compassionate leave by IRA prisoners involved "dirty protest" in Ulster's Maze and Armagn prisons will be considered as part of an easing of restriction

Lord Godber dies Lord Codber, former Conservative Agriculture Minister, died at his home, Willington Manor, oear Bedford, aged 66.

Carnival time

An estimated 30,000 people watched the Nntting Hill carnival yesterday. It was almost trouble free, with only six arrests after 18 on Sunday.

Raiders disturbed Raiders of comedian Frankie Howerd's home near Axbridge, in the second half. Page 4 Somerset, left virtually emptyhanded after being disturbed by visiting Jehovah's Witnesses.

Briefly - . .

Fenezuela's air traffic controllers called a natlnnwide strike

Twenty-five people died in political violence throughout ment plans for country-of-Guatemala at the weekend. origin marks on some consumer Zimhabwe became the 153rd

member of the UN. Villagers of Marlnaleda, Spain.

ended their hunger strike after

CONTENTS

Grain market: unsettled by Management: toy baron West's priorities; invest- Wine: Fino at its driest and Sponsorship:

business- Survey: Aerospace Insert,

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sports and the arts 11 Appaintments Commodities Company News ...

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ANNUAL STATEMENTS Brady Ind. Hopkinsons Hidgs. PROSPECTUS

For latest Share Index phane 01-246 8026

BUSINESS New oil round

No. 28,252

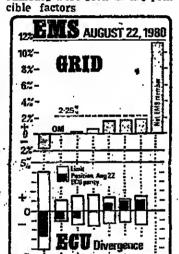
being prepared

• OIL COMPANIES may be allowed to buy the right to nominate offahore oil blocks in the eighth round of licensing now being prepared. Seventh round nominations could raise £200m. The npcrators' association warned that maintaining nil self-sufficiency into the 1990s requires up to 90 exploration wells a year compared with 33 last year. Back Page

 SEAMEN operating about 80 North Sea rig supply boats accepted a 27 per cent pay offer.

6 IRISH PUNT rose to the top of the European Monetary System for the first time ever on a Friday. It displaced the French franc with the Dutch guilder running a close third place. The Belgian franc showed little movement and stayed above the D-mark, with the latter hardly affected by last week's Bundesbank decision to leave key lending rates unchanged and to reduce banks'

minimum reserve requirements. demand for an iodependent The Italian lira was again the trade union movement in Poland, Strikers in Cdansk and weakest member of the system, and was slowly edging towards Its maximum permitted diverdelegates from Szczecin say gence from central rates. High importance as the stoppages inflation and devaluation rumours were seen as the princontinue, and that strikers would be willing to mitigate wage rise demands in its



the cross rates from which no currancy (except the hra) may move
mara than 2½ per cant. The lawer
chart gives each currency's divergence
from its "central rate" against the
European Currency Unit (ECU), itself
a basket al European currencies.

• WALL STREET was down 3.58 near the close at 954.61. Page 15

• FRANCE'S draft budget for 1981 plans a deficit of about FFr 30bn (£3bn), one of the smallest in the West. Back Page

• WEST GERMANY'S current account deficit may fall to DM 20bn (£4.4bn) next year from DM 27bn, the IFO Economic Institute said. Page 2

TREASURY appointed a new chief fore-caster, completing a reorganisa-tion of the department's economists. Back Page

• THE CBI is about to start interviewing candidates to succeed the late Sir John

Methven AGRICULTURAL exports, valued at £2.06bn in 1979, were worth £1.15bn in the first half of this year and should improve

• EUROPEAN steel producers are unfairly helped to undercut the UK industry by State intervention, the British Iron and Steel Consumers Cnuncil claimed. Back Page

 MARKS AND SPENCER backed controversial Coverngoods. Page 4

• MEDENS TRUST increased pre-tax profit by 17 per cent to a record £750,367 for the year to June 30. Page 12

ning at over \$30m.

represent about a quarter of Lloyd's total computer leasing insurance business of \$1.2hn. Computer leasing losses are expected to prinduce the largest aeries of lusses in Lluyd's history; \$340m is Lloyd's official estimate, although unofficial estimates place the figure as

In nrder tn keep the market's total losses down, Llnyd's has been seeking a negotiated settlement with Itel in avoid

Itel stressed that if a final settlement with Lloyd's was not reached "in the near future,

BY CHRISTOPHER BOBINSKI IN WARSAW EXTENSIVE CHANGES in hoth Szczecin, and it secms likely the Polish Government and that the two towns will co- workers demands. The number ordinate their position in of signatories has grown to over party leadership and an offer of frec elections to the country's separate negotiations. Gdansk 200 people, including the film trade unions made by the party leader Mr. Edward Cicrek after a Communist Party Central strike committee is being advised by a small group of historians, journalists and cconomists from Warsaw lcd hy Mr. Tadeusz Mazowiccki, the editor of a Catholic monthly Committee meeting at the weekend failed to prompt workers striking in Poland'a Baltie

Wide-reaching changes io the Polish leadership and

the offer of free elections to the country's trade ucions

Reports to the Moscow Government newspaper

Izvestia and by the Tass agency indicate implicit Soviet

endorsement of the major economic and political con-

have failed to resolve the shipyard strike.

cessions by Mr. Gierek to the strikers.

towns lo return to work.

Yesterday strikers in Gdansk,

who were manifestly uninipres-

sed by the reshuffle, were wait-ing for Mr. Jozef Pinkowski, the

new Prime Minister, to start

talks with the Inter-Factory Strike Committee (MKS), which is co-ordinating the strike in the

Despite a long list of both

economic and political demands,

the central issue for the strikers

in Gdansk has become the

that this issue is growing in

Contact has now been estab-

lished between strike com-

mittees in Cdansk and io

iog to them to do justice to the director Mr. Andrzej Wajda. The task that faces Mr. Pinkowski when he arrives will and a one-time Parliamentary

the socialist community. Page 2

be to convince the strikers at the shipyards that the authori-ties' offer of free elections in the existing trade union movement is sincere. Dismissals at The advisers are among the the weekend included Mr. Jan 64 original signatories of a Szydlak, head of the official letter to the authorities, appeal-trade union movement, and no

new appointment has been made. The Central Trade Union Council is to meet today. The close of Mr. Gierek's specch at the central committee meeting on Sunday, which approved the changes, suggest that the authorities are more willing to concede workers' demands than they were in talks last week.

The workers' protest is now finding an echo within the Continued on Back Page

Soviet support for concessions

BY DAVID SATTER IN MOSCOW

THE SOVIET UNION last ntght gave its implicit en-dorsement in major economic and political concessions by Mr. Edward Gierek, the leader of the Polisb Communist Party, aimed at ending Poland's labour crisis.

The Government oewspaper Izvestia yesterdsy, reporting approvingly nn Mr. Gierek's proposals, gave the most detailed account of the workers' action in Poland yet in the Snviet Press and

acknowledged that Poland was gripped hy a "serious eco-nomic and political crisis." But it made nn mentinn nf

the Polisb Government's agreement to free elections to the nation's trade unions. The Soviet news agency Tass, io a separate commentary which appeared to presage the Soviet pripaganda line on the issue, accused the West of trying to exploit the crisis in

The Soviet Press bas shown extreme reticence about the events in Poland but the article in Izvestia and the accompanying Tass com-mentary appeared to indicate that the Soviet authorities were now prepared to back Cierek's changes while depicting the strikes them-selves as of benefit to the

Izvestla sald Mr. Gierek had noted io his speech that a Continued on Back Page

World Bank considers plan to aid poorer oil-importing nations

THE WORLD BANK is floating the idea with its member governments and commercial lenders of setting up a separate affillate which would invest up to \$25bn over the next five years in energy production in poorer, oil-importing countries.

The new venture has the endorsement of Mr. Robert McNamara, the Wnrld Bank's president, in a foreword to a bank study on third world energy published yesterday.

The report, a unique attempt tn analyse the energy crisis in developing countries, says that their oil import bill will rise unchecked from \$50bn this year to \$110bn (in constant dollars) by 1990 unless they bonst energy production. Such a trend would enormously compli-cate their task of financing an already large external debt.

But by maximising energy production and conservation, the oil importing poor countries could cut their import bill hy \$25-30bn in 1990, the bank report claims in support of ita argument for a new energy

Last month the bank was given the go-abead by the mem-ber government representatives summit in Venice, support by on its board to explore the idea Mexico and Venezuela



of divesting its rapidly expanding energy lending programme into a new affiliate. Mr. Ernest Stern, the bank's senior vice president for operations, said that initial snundings were favourable.

governments have roughly the same view," Mr. Stern said. He cited the explicit hacking for an energy bank by major indus-

An energy affiliate would borrow from the private capital markets, as the World Bank does, or try to seek finance directly from surplus OPEC countries, though Saudi Arabla and Kuwait are involved in a quite separate dispute with the World Bank over whether the Palestine Liberation Organisation should be given official observer atatus at the World

Bank's annual meetings. Mr. McNamara has sounded several New York banks on how the markets would receive a oew energy institution.
"Nnthing the commercial underwriters have said to the World Bank shows the idea is unfeasible," Mr. Stern claimed,

The risk element would be quite small, he said. In a fiveyear, \$25bn lending programme, only \$2.4bn would go for inherently chancier jobs of aurveying and test drilling for "Major groups of our member oll and gas in unexploited fields in the Third World.

The energy affiliate idea is expected to draw first detailed reaction from member governments when their Finance Ministers convene in Washington for next month's annual

energy development generally International Monetary Fund In Latin America, and some and World Bank annual meet-interest by OPEC oil producers. ings.

institution is needed may be questioned. On present plans, the World Bank intends in lend some \$13bn over the next five years for energy development. But this amount, Mr. McNamara says, "is some \$12bn short of what is both desirable and feasible." The hank staff argue that any expanded lending programme should be handled in a separate affiliate. Energy in developing countries

arbitration pay award.

French ports truce ends

BY DAVID WHITE IN PARIS

BLOCKADES were back at the French Channel ports yesterday after a partial truce at the The fishermen's dispute, which the French Cabinet still of is due to discuss tomorrow, ferries. signs of deteriorating with a clash between police and demonstrators in Boulogne.

The police used tear gas to disperse angry crowds there after fishermen held up re-

frigerated lorrics to stop them leaving the barbour area.

Mr. Alan Pitt, the P & O Channel services manager, said

none of the company's ships would sail into Boulogne. The credibility of fisherman in all French porta is now at zero. I am not prepared to put and this moment," he said. This means all previously Boulngnebound P & O ferries will asil to
the Belgian port of Zeebrugge.
The access channel, to the

A second meeting of the Antifer supertanker port near Le Havre, was hlocked by half a dozen trawlers, and naviga-

After a warning of sanctions hy M. Christian Bonnet, the Interior Minister, a navy gunhoat and three tugs were reported to be preparing to free the barbour in a repeat performance of last Friday's rescue operation at Fos, near Marsellles.

cooflict went into its fourth

Some 150 riot officers were deployed around Antifer terminal, France's largest oil terminal, which handled 37m tons nf oil last year.

French refiners warned that he ports dispute could cause local shortages of some refined oil oroducts within a few days. Channel ports were mostly closed again after helng opened during the weekend. Calais and

Boulogne were expected to be resealed although ear and rail ferries were operating yesterday

were unable to sail from Le Hsvre.
St. Malo and Roscoff, in

Brittany, were the only ports still open to cross-channel The situation in Fos, another

French oil terminal, was tense as the navy kept the entry free. A call by the Communist-led CGT union for a solidarity strike by dockers and other workers in the Marseilles region had a mixed following. The Mediter-ranean port of Set was hlockaded again.

M. Raymond Barre, the Prime Minister, who returned to Paris from holiday yesterday, said in a newspaper interview that the Government intended to ensure free movement in French ports and he would oot show "the

National Conciliation Board in Paris to discuss the labour disinvolving Boulogne pute trawlermen was suspended when the CGP union's representative walked out in protest against police intervention. Discussions centred on crew levels for trawlers of over 50 metres. Simulfaceous talks were tak-

ing place between Covernment officials and representatives of Normandy inshore fishermen. This third meeting was expec-ted to put the final touches to proposals drawn up on Saturday. These involve definition of fishing zones, import regulations and other points. The Government, however, is standing firm against the main demand, an increase in fuel subsidies.

Local meetings on Saturday produced some progress on minor details, such as marketing arrangements and a clampdown on clandestine fishing. The CGT

resealed although ear and rail boycotted the meetings. ferries were operating yesterday M. Joel Le Theule. Transport and Hovercraft services were Minister, whose department is functioning normally.

Dunkirk, Dieppe. Le Havre and Cherbourg were all closed down yesterday morning. Some 2,000 England-bound passengers

Similarly. Whose department is due to make a statement after Wednesday's Cabinet meeting, the first to discuss the issue.

Pilotage dnes writ, Page 4

No sign of Times peace

THE FIRST-EVER strike hy meots decided early yesterday journalists on The Timea goes into its fourth working day today with no sign of an early

solution to the dispute over an paper that arbitration officials had auggested "at least 10 ways" in which the deadlock

over pay could be broken.
The management of the paper and its three supplenot to try to hring out an issue tnday following the failure of further attempts in solve the dispute over the weekend.

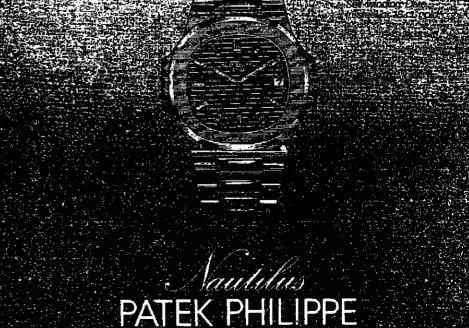
emergency session for three But the inumalists claimed The Times board met in yesterday in letters sent to emergency session for three national directors of the newsof the paper'a chapel (branch) of the National Union of Journalists said yesterday they had received no communication from maoagement Continued nn Back Page

Patek Philippe. Hand-craice

In 1839, the founding year of Patek Philippe, finishing a watch entirely by hand was the rule Today it is the exception. Should rare watches made in this way appeal to you. SO WILLOUR COLOUR DIOCHURE

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Itel warns Lloyd's of lawsuit

total losses that the Lloyd's

Under the planned deal

(mainly enmputers) from Itel

which wnuld help offset the

If concluded, this package

would have represented a sub-

stantial extra premium to

underwriters, as the entire package was estimated to be worth \$100m to Lloyd's. Lloyd's

underwriters would have gained the right to remarket the com-puters traded in under-insured

leases, and pussibly cuntrul over

In return underwriters wnuld

to repay a significant number

Itel complained at the week-

existing insured leases.

nf its creditors.

market faced.

insurance claims.

BY JOHN MOORE

ITEL CORPORATION of the U.S., the loss-making leasing concern, bas warned that extensive legal action may arise over computer leasing insurances which it arranged at Lloyd's of London

Itel, which has been seeking a settlement with Lloyd's of about \$200m (£84.53m) of its insurance claims, said discussions with underwriters "have prngressed very sinwly and have been marked by pronounced and varied disagreement between Itel and the under-

The warning was made as the San Francisco-based lessing company revealed at the weekend that its lossea fnr 1979 were expected to be in excess of \$430m, while lnases for the first slx mnntha nf 1980 were run-Itel's insurances with Lloyd's

eventusl insurance claims, which would have allowed Itel end of slow progress in its dis-cussiooa with Lloyd's and noted its disagreement with the under-writers. Though the negotiatinns were continuing, the group high as \$800m.

was " uncertain as !o whether a satisfactory settlement agreement will be reached." Itel estimated earlier this extensive litigatinn involving

year that its claims against Itel, Lloyd's and other parties Lloyd's could intal over \$200m. in the insured transactions may Lloyd'a underwriters were negotiating an unusual package The group said that "there which could have reduced the

are currently pending some suits against it involving individual insured transactions, in one of which Itel has made claims underwriters were seeking a payment in cash and assets against Llnyd's underwriters." Computer leasing insurances were offered by 55 Lloyd's

underwriting syndicates and a

number of insurance companies in the 1970s. The policies protected leasing companies against the early termination of computer leases by their customers. When new IBM mndels and cheaper leases became available in 1978 almost every customer gave nutice of likely cancellatinn with a view either to

changing equipment nr renego-tiating its lease. More than 14,000 insurance undertake to meet all of Itel's claims poured into Lloyd's, underwriters whose become embroiled in litigation with other leasing concerns. One action launched by a computer leasing company is seeking claims and damages of

£ in New York Aug. 22 · Previoue

\$2,3\$95.360\$ \$2,364\$ 365\$ 1 month 1.47-1.41 dis 1.30,1.25 die 3 months 12months | 5.80-6.60 dis | \$.95-6.80 dis

THE CRISIS IN POLAND

Reshuffle with little hope of change

BY CHRISTOPHER BOBINSKI IN WARSAW

weekend left the party leader head of the official trade umons. Mr. Edward Gierek in charge but have removed those most identified with the political and economic policies which led to changes included an offer of which Poland owes to the West.

The resbuffle has also eliminated those who over the past few days have heen arguing against comin gto terms with the striking workers on the Baltic coast who have been demanding independent trade unions since August 14.

The victory of the pragmatists in the leadership does not necessarily mean that the changes open a period of liheral policies. The fact that almost all the new appointees have at some ambitious figure known for his time in the past held senior pragmatic approach who was is reputed to have taken a hard party posts shows that little himself ousted from the leader-line towards Poland's private effort was made to look for ship last February, comes hack

summit

talks moving again.

By Alan Mackie in Calro

PRESIDENT Anwar Sadat of Egypt is to repeat his call for a

three-way Camp David-style summit to follow the United

States presidential elections in

November so as to get the suspeoded Palestinian autonomy

The offer, made first in his

recent exchange of letters with

Mr. Menabem Begin, Israel's Prime Minister, received a cool reception from the Israeli leader

and from President Carter, both

of whom want the talks to

In an interview with the

President Sadat ruled out early

resumption of the talks, which

against its West Bank settle-

ments policy. He said then that

newspaper, Maariv,

restart as soon as possible.

THE EXTENSIVE changes propaganada policy, Mr. Jerzy head of the Planning Commis- early 1970s would seems to made in the Polish Government Lukaszewicz, have been dission. Mr. Kisiel's appointment qualify him for the leadership and Communist Party at the missed as has Mr. Jan Szydlak, will reassure Western bankers of a government which promises the set of the efficient trade unions. A speech by Mr. Gierek on Sunday at the central commit-tee meeting which approved the than ever about the \$20bn debt new elections to the existing Mr. Kisiel's new post promises trade unings. The tone of the speech showed a greater willingness by the authorities to con-

> between tha workers and the party can be overcome and whether agreement on the central trade union issue is possible. heen left open.

cede strikers' demands.

Mr. Stefan Olszowski. to the Politburo

who know and respect him and a period of moderate and sensi-

investment Mr. Marian Krzak, till now the Deputy Finance Minister Talks over the next few days who has played s prominent will show if the credibility gap role in credit negotistions with Western banks, tskes over at the Finance Ministry. The appointment of the reti-

cent Mr. Jozef Pinkowski as Prime Minister in place of Mr. Edward Bahiuch, who resigned after a mere six months in office, comes as a surprise. He farming sector when he was in charge of agriculture in the party leadership. On the other hand his work in preparing ill-Both the head of the Planning

Mr. Henryk Kislel, till now party leadersbip. On the other

Commission. Mr. Tadeusz

Minister of Finance, has hand his work in preparing ill
Wrzaszczyk, and the chief of become s Deputy Premier and fated economic reforms in the

qualify him for the leadership of a government which promises improvement. The combination of the two men is, perhaps, a guarantee that future changes will not go too far.

A significant appointment is that of Mr. Tadeusz Grabski, as Deputy Prime Minister. As party first secretary in Konin province in December 1978, he made a speech at the central committee meeting criticising the leadership for the economic

the frustration felt by local officials at the degree of centralisation in the country, cost him his job and he was demoted last year to become a factory manager in Poznan. However. his offending speech also criticised the leadership for its tolerant policies towards dissidents and the Catholic Church. That would appear to be snother indication that the present changes do not signal the broadcasting media.



Edward Gerek: a conciliatory tone.

liberal policies. Both the head of the Price Commission and the Essential Statistical Office have heen dis-missed, as has the head of radio and television.

Mr. Jozef Barecki. editor-inchief of the main party daily. Tryhuna Ludn comes in to bead

Russians given only the barest details

BY DAVID SATTER IN MOSCOW

in Poland spreading rapidly or any reference to how many among ordinary Seviet citizens, the official Soviet media has issued only the barest details of the crisis there, and no information at all about the

However, enough information from all sources is getting through to generate discussion, even among workers waiting in evening lines nutside Moscow'a food and liquor stores. With Western radio hroad-

casts largely jammed—but occasionally audible-Soviet citizens have heen forced, hy and large, to rely for information predominantly on the official press. which has characterised the Polish strike movement as work interruptions."

The Soviet media has made only three references to the crisis in Polsnd since It began

WITH DISCUSSION of events tion of what they are seeking, are involved. Soviet citizens received their

first clear indication of the seriousness of the situation in Poland yesterday when the cen-Polish offer ta allow free trade tral newspapers published a union elections. tral newspapers published a despatch from Warsaw by Tass, the Soviet news agency. reported the resignation of Mr. Edward Bahinch, the Polish Prime Minister, two nther Polish Politburo members and

two candidate members.
The despatch about Mr. Bahiuch's resignation was read out on the nightly TV news programme on Sanday, and was hacked hy a 30-second film of a grave Mr. Edward Gierek, the Polish party leader, spparently addressing a party meeting.
The jamming of the Western

radio broadcasts was a serious step which bad not been prompted even by the Soviet invasion of Afghanistan, and it last month, and there has yet invasion of Afghanistan, and it to be an explanation of the workers grievances, any indica-

warning to strike leaders

BY LESLIE COLITT IN BERIEN WARNING has been given by West Berlin Communists that the "so-called workers spokesmen" in Poland are "trying to destroy the Socialist foundations" of Poland and to remove it from the

Socialist community.

The charges, reflecting the fears of orthodox Communist officiala in East Berlin and Moscow, are the most serious tn be ievelled so far against the Polish strike leaders.
The charges are almost

identical to those made by East Germany and the Soviet Union against Czeche-slovakia's refermed Com-munist Government before the Soviet Invasion of Czecho sinvakia in August, 1968. They reflect the fears of

orthodox Communists that Mr. Gierek is running behind events, The alarm is sounded in Die Wahrheit, the newspaper of the West Berlin Community Party, an offshoot of the East

German party, which is often used in express the views of the East German leadership Die Wahrheit says that in reality, the spokesmen of the striking Polish workers are "dissidents." These "dark elements" have launched a 16point pamphlet which aims "step by step to destroy the Socialist foundations of

people's Poland." The newspaper warms that the strikers' leaders also want to "annish the principle of democratic centralism." This is a reference to the Gdansk United Strike Committee's demand for free trade unions,

Czech troops arrive

TROOPS from Czechoslovakia and Bulgaria have begun arriving in East Germany for next week's Warsaw Pact manoeuvres, code-named Comradeship in Arms '80, our Berlin Correspondent writes. The exercises, involving 40,000 troops, will hickde naval units from the Seviet Union, East Germany and Poland, which are to practise landings on the Baltic sea

Israel and EEC in clash Sadat to renew call for over absent attaches autonomy

BY DAVID LENNON IN TEL AVIV

sttaches from manoeuvres on the occupied Golan Heights last month, has policies. caused a row which highlights the growing strain in relations hetween Israel and Europe.

Israel regards the absence of the British, French, German and Italian attaches as a political hoycott, and the army bas threatened not to invite them to attend future manoeuvres in the occupied future

territories. Gen. Yehoshua Saguy, director of military intelligence, called in the attachés last week, to ask ahout their absence. An army Palestinian self-determination official claimed yesterday that and participation by the staved away from the Golan manoeuvres on instructions from their ambassadors.

be suspended indefinitely But at least one amhassador earlier this month in protest denied this and stressed that no But at least one ambassador against Israel's formal annexa-tion of east Jersusalem and bad been taken by the EEC countries to boycott military

both sides need a cooling off The Jerusalem Post reported, certain whether the clash indiperiod of a few months to however, that EEC diplomats cated a possibly greater Syrian had explained to Israel that the involvement in the warfare

THE ABSENCE of four Euro- attschés' absence from Community military maneouvres reflected general dissatisfaction of their Governments

> The Foreign Ministry Jerusalem yesterday said that the affair of the absent attachés was "not a diplomatic issue as far as Israel was concerned. But EEC diplomats questioned this, pointing out the "curious time-lag" between manoenvres, almost 'a month ago, and the decision to call in the attachés last week.

Israel is angry with Europe over the EEC declaration at Venice in June, which called for the straches had said they had Palestine Liberation Organisation in the peace negotiations.

Meanwhile, Israel is braced for further clashes with Syrian

forces following a dog-fight over south Lebanon on Sunday, in which one Syrlan MiG-21 was shot down by Israeli alreraft, Senior officers in Tel Aviv said yesterday they were un-

Carter line on reflation wins support

By David Buchan in Washington

SUPPORT for the Carter Administration's measured approach to reflating the U.S. economy has come in a report from an important congressional committee, which also endorsed production-oriented tax cuts, popular amnug Republicans.

The Joint Economic Committee gave a warning that anti-recession meves were not only ineffec-tive in influencing the course of the last six downturns in the economy since the Second World War, but because of delays in enacting tax cuts and speeding np public works, came too late and overstimulated the recoverles. This view squares with the Administration's argument

But the committee, made of Democrats and Republicans from both Houses of Congress, also reflects the growing consensus amnng both parties that a 1981 tax reduction should focus as much on generating business investment as on income tax relief for individuals.

Bonn 'may cut deficit to £4bn'

BY JOHNATHAN CARR IN BONN

WEST GERMANY may he able consider whether it can conment is not considering cutting to cut its current account deficit tinue to make payments abroad its payments to the EEC, it is to cut its current account deficit tinue to make payments abroad ext year to about DM 20bn £4.4bn) compared with DM 27bn this year, according to a new report by the IFO Economic Institute of Munich.

But, the institute adds, that it is not certain that the 1981 deficit will he any easier to finance through capital imports than the 1980 one, and urges that further efforts should be made to save on imported oil.

The institute also says that this year. West Germany will have to Althoug

—to the European Community, determined to reduce their rate fo example—in as great measure of increase. The institute's foreas in the past.
The institute's prediction is

important because the organisation was among the first to forecast correctly West Ger-many's plunge into current account deficit. After s surplus of DM 17.5bn in 1978, the country bad a deficit of DM 10.1hn last year and one of DM 12.3bn in the first balf of

Although the Bonn Govern-

export prices up by only 7 per

cast fits well into the pattern of

One key reason for the increasing current account deficit in the first balf of this year has been the further worsening of West Germany's

terms of trade, with import prices, particularly of oil, up

by an average 18.5 per cent, and

likely to use.

Tripoli-Malta quarrel halts oil search

BY RUPERT CORNWELL IN ROME

A NEW EPISODE in the operating under contract for the squahhle hetween Libya and Texaco oil group, which had Malta over territorial waters won the exploration permit from has forced the Salpem Two exploration vessel, owned by ENI, the Italian state energy corporation, to abandon oil drilling operations off Medina Bank, part of Maltese continental shelf. the Trouble hegan earlier this month when the Saipem Two, that Tripoli oid not accept Hague.

the Valletta Government, began drilling off the bank, about 50 miles south-east of Malta. subject to harassment from

Lihyan vessels including a sub-

Malta's right to explore the The incident is the latest in

a conflict between Malta and Libya over exploration rights in the southern Mediterranean Ahout a week ago it became and follows an abrupt worsen ing of relations hetween the two countries. Tripoli has remarine. Finally, an officer from fused to recognise a ruling on a Lihyan frigate went aboard the dispute from the Interthe Salpem to tell its captain national Court of Justice at the

for manoeuvres

ENERGY IN DEVELOPING COUNTRIES

David Dodwell reports on the World Bank study of the Third World's energy problems Five-fold

Improved efficiency will cut crippling fuel costs

traffic jams in the centre of this notoriously congested city, is of high cost energy. saving drivers about 150,000 litres of petrol a day—a saving for the Government on its oil Import bill of about \$22m a

With measures like this, and many others, mainly industry, transport and electricity generation, developing countries could save a total of \$25-30hn a year on their energy import bills by 1990. Instead of consuming about 30.6m barrels of oil equivalent a day (bdoe) consumption could be cut by 15 The developing countries

of total world commercial energy consumption-about 12 per cent this year (16.7m bdos from a total of 137.8m bdoe) and an estimated 15 per cent in 1990 (30.6m bdoe from a total of 201.5m hdoe). But recent oil price increases have hurt them more than any other In the past 10 years, the cost

of their oil imports has soared ten-fold; and can he expected to double again by 1990. tbeir infant industries, limited horrowing capabilities and already-high debt hurdens, this is a cost few are economically sturdy enough to cope with. The World Bank note that the Unalloca developing countries are in one sense lucky: "They are less committed to a capital stock and life style evolved in an era of

ahle to adjust to the new era The very fact that they are

difficult to curb demand for oil. Their economies are growing faster than those of the indussays. "Demand for commercial energy with the rapid growth of cities, industries, motorised transport and other energyintensive developments, is growing faster than GNP.

Just 17 countries account for 85 per cent of all the commer-Bank as part of the "developaccount for only a small part ing world." The others consume so little that for development increase their energy consump tion regardless of cost

WORLD

773

5.7

developing their own resources where possible) hut also to use commercial energy as efficiently as possible. The World Bank identifies three crucial areas for energy saving: • Industry: this accounts for

35 per cent of all the commercial energy consumed in the developing countries. Fourteen countries absorb most of thisprominent among them Brazil, India. Mexico and Romania-because they have become major producers of energy-intensive industrial procial energy consumed in the 121 ducts like steel, cement. countries listed by the World ammonia, copper, aluminium. to occur at all they must rapidly quick savings - like hetter

pnlp and paper and fertilisers. The World Bank claims "simple changes" could bring recovery of hy-products, instal-

WORLD COMMERCIAL ENERGY PRODUCTION, 1980-90

1.5 0.1 0.4

(Million barrels a day of oil equivalent)

OIL EXPORTING

DEVELOPING COUNTRIES

with the "simple changes," trim energy needed by 10 per cent in 1985 and by 15 per cent in 1990. This would bring a saving in that year of about 1.3m barrels a day worth \$19hn, and would trim the energy import bill of developing countries by

Biggest savings are possible in the cement industry and in the pulp and paper industry. where efficiencies could cut consumption by up to 25 per cent. Savings of up to 20 per cent are possible in petroleum refining,

• Transport: this accounts for between 10 and 25 per cent of energy consumed in developing countries, most of il on road transport. The World Bank eston regardless of cost.

lation of waste-heat hoilers, mates savings of up to 1m b/d

It is essential for such better insulation and better are possible—worth \$11hn this mates savings of up to 1m b/d

OIL IMPORTING

1990

1.6

75.2

2.0 1.5 2.4

1.5 0.1

0.3

7.5

A BAN on parking in 39 streets cheap coal and oil," it says—so countries not only to save on bearings. Investment in retro year and \$25bn in 1990—which in Bangkok, which has reduced they are perhaps more easily costly energy imports (by fitting and attention to other would trim the oil import hill by energy-saving techniques could. 10 per cent. The use of more efficient engines in cars, buses and

lorries would help (the use of ethanol, produced from sugar csne, in petrol in Brazil attracts attention). So would the use if coastal shipping, river transport and railways for bulk cargo carriage. • Electricity: this accounts for

about 25 per cent of commercial energy consumed in developing countries. By 1990 it will account for 30 per cent and the cost of oil for power generation is likely to be \$30bn.

Energy losses are estimated to average up to 6 per cent in power generation, and up to a mission and distribution. In certaln countries, losses are much higher. In India, for example power stations rarely operate al more than 50 per cent of installed capacity, Random loadshedding and regular power cuts inflict untold cost on the economy.

2bn a year in fuel hills. fired power generation, with the establishment of national grids, and exploitation of hydro and nuclear power where suitable.

Io developing countries as a whole, more efficient operation could cut 7 per cent from installed generating capacity needs by 1990, saving \$20hn in capital investment, and about Shifts from oil-fired to coal-

rise urged in forest planting

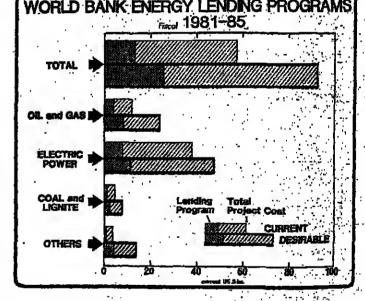
MORE THAN 10m hectares of forest go np in smoke every year in the developing world, where 2bn people use wood as fuel for cnoking and heat-

The depletion is so rapid that the World Bank is calling for a five-fold increase in forest planting in the next 20

If all thrse people now using "traditinnal fuet"— which weuld slso include dung—were to switch to nil, demand for nil in the developcountries would evidently leap by at least 2.5m barrels a day, adding about \$30bn to their annual oil-import bill.

Many developing countries thus face a "double energy crisis"—how are they to curb depletinn of inrests and soil fertility without undaly stimulating the import of expensive oil?

The World Bank proposes installing small hydro-electric stations; encouraging use of renewable energy like meth-"fermented" from animal wastes, nr solar energy as a means of lessening the crisis. It suggests a "desirworth \$1.1bu to be spent on tackling the wood fuel crisis



Separate body may try to ease energy crisis

energy crisis of major proportions" facing many developing whether or not to go shead committed hinges on:

• The size of lending prothe coming five years, covering year in the late 80s. oil, gas, electric power and renewable energies like firewood, mitments over the coming five. The size of additional funds substantially larger programme

coming from new sources per would be both feasible and haps member states of the desirable —so it outlines plans. Organisation of Petroleum Ex- for a "desirable progra porting Countries and the involving an extra \$1280.

THE WORLD BANK may Organisation for Economic Co-decide by the end of the year operation and Development to establish a separate energy

The World Bank is by far the to establish a separate energy The World Bank is by lat the affiliate to cope with the largest official agency offering finance for commercial energy tions" facing many developing development: in 1980, it will countries. The decision on lend about half of the \$6.350 committed by multilateral agencies. But this is only a multilateral small proportion of total investgrammes for energy projects in this year and sround \$82bn 2 ment needs, estimated at \$340n

years totalling \$15bn. But "a

Central ne

laicuis:

Fle lith F

Investment programme of \$500bn needed to develop untapped resources to oils or solar energy). DEVELOPING countries have to their own energy supplies." "would be well advised" to Others, like Argentina. Brazil, three-quarters of those for oil. In spite of the ecological and Even now, exploitation of mount 'as large a programme sugar cane, molásses, sorghum

vast and harely tapped energy transition into an era of high- natural gas and many other staggeringly expensive - the that they exploit them as soon neglected through the years of

For example, net-oil im- The seismic and geophysical America and the Middle East supplies were too costly in view \$450-\$500hn. have proven oil reserves of nf the comparatively small estiharrels-and ultimately mated reserves of oil. recoverable reserves of perhaps • Difficult terrain or complex cases, substantial savings would 3.6m barrels. barrels. Research has never been carried out to pin point these vast untapped

been explored at best super- consumption) because they were ficially," the World Bank ssys. too small, or too cumbersome large, easily exploitable reserves to transport (natural gas or tar will spend in 1980 alone on imports of oil (almost \$50bn)." are not present, but not enough sands). mske an important contribution able comme

These resources—which include oil shale, tar sands, coal, cheap oil, mainly hecause :-

1.8

and other

geological structures made exploitation uneconomic.

The reserves were not ex-Enough to determine that (coal), or technically difficult importing developing countries Sri Lanka.

expanded energy programme in the nil importing developing countries" over the next decade

In the great majority of lifting the overall output to be gained by substituting dome-'Investment spending on the portable (most oil companies order of \$40-\$60bn in 1980 reserves. portable (most oil companies order of \$40-\$600n in 1980)

"The vast majority of the have an overtiding interest in dollars during the decade is impoir dependent countries has export rather than domestic large in relation to spending in recent years, but is about equal to the sum which the oil

to establish whether there are • Technologies did not exist to This sum is predicted to rise to smaller deposits that could exploit reserves at any reason- \$111bn in 1990.

these resources may appear of oil exploration and development as their managerial, techcost energy makes it imperative renewable supplies—have been World Bank is calling for an nical and financial resources permit." At present, 20 developing countries produce about 2m barrels of oil a day, but porters in Africa, Asia, Latin surveys needed to pippoint involving investment of between appropriate investment could lift this to 2.9m by 1990, with In the World Bank's words: oil from current non-producers

> The need for action is most urgent among those countries most heavily dependent on oil imports. Over 60 developing countries import oil to meel 76 per cent or more of their energy oecds - among them Portugal. the Philippines, Thailand, and Some countries are already

increasing oil production, and

seem headed for self-sufficiency most notably Chad. Ghana,

Chile, and Turkey, once snuhbed private oll companies but are now actively seeking their help in the search for oll. Countries which have old and declining oil fields are called

upon by the Bank to "enhance" recovery using latest improved technologies. Canada and the U.S. will gel between 30-50 per cent of their future oil from enhanced recovery." the Bank Natural gas will soon play an

Bangladesh. Colombia, Mexico, Pakistan and Romania already use gas for domestic needs. while Iodonesia, Nigeria and Malaysia could increase half and two-thirds of the domestic use instead of increasing exports of liquid natural gas. While it is more difficult about 40 per cent less than oil. to transport than oil. gas is Total recoverable reserves are the Beak says these countries Ivory Coast. snd Pakistan. abundant, with proven reserves at least five times those of oil. ahead,

Already natural gas is talked of as "one of the cheapest options in developing countries," and by 1990 it could account for 10-12 per cent of world consumption. At present much is wasted: in 1978, 1,385m harrels of nil equivalent were simply flared off-about 40 per cent of production.

Coal is likely to make an increasingly important contribution to domestic energy needs in the next two decades, reversimportant part in oil import ing the trend of the past 30 substitution. Algeria, Argentina, years, in which coal fell from 59 to 29 per cent of world energy production.

The World Bank estimates that coal will provide between world's additional fuel up to the year 2000, with costs often

transport problems associated with coal mining, output can be expected to double in the next 20 years, with trade multiplying 15-fold. At present there are just 29

producers in the developing world, with nine accounting for 90 per cent of output (Brazil, Colombia, India, Korea, Mexico, Romania, Turkey, Vietnam, and Yugoslavia). But another 28 countries are known to have reserves, and many of these are likely to begin production for domestic use in the near future. The World Bank calls for investment investment totalling \$175-\$350bn over the next decade for new mines, transport links, ports and ships to meet ex-

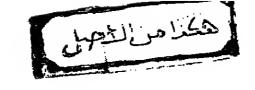
pected demand. Many new and renewable energy sources are likely to come into use in the decade or cassava shows promise as madditive in petrol (already in use in Brazil), while plans for solar and wind power are well advanced. In electricity generation nuclear and hydro-electric power may soon be cheap com-

pared with oil and many governments—like Korea and Taiwan—aim to reduce oil imports by developing this All of these sources would not long agn have been regarded as uneconomical. Today some of them are still comparatively en

to remain the case for long. FINANCIAL TIMES, published dall except Sundays, and holighya. U.S. subscription reras. \$885.00 per some Second Class postage paid at his york, N.Y. and st. additional publish. Alcohol made from

pensive, but with the relenties

rise in oil prices, this is unlikely



German food sales to UK climb to record levels

BY DAVID CHURCHILL, CONSUMER AFFAIRS CORRESPONDENT

SALES of West German food from and drink in the UK are brewe

Figures just released by the Central Marketing Organisation imported in lager quantities. for German Agricultural Industries (CMA) reveal that imports of West Cerman food and drinks increased by 18 per cent last year to reach a record 975,000 tons worth about £600m at retail prices. This represents a minefold increase on German food and drink sales since the early 1970s. .

Although no official figures are yet available for 1980 sales. estimates within the grocery trade suggest that the volume of imports will comfortably exceed last year's growth rate. This means that UK imports will exceed 1m tons for the first time and seriously challenge Italy, Holland and France who are at present ahead of the UK in the league table of German food and drink imports. and that food sales in real

the world for German beer and

expected to reach record levels licence in the UK, imported this year at a time when the German beer increased in overall growth in the UK food market remains static. German beer increased in volume by 12 per cent last year to reach 142m pints. Only Guinneaa from Last year imports of German

wines road by 45 per cent to reach 456,000 hectolitres (about 10m gallons) which meant that the UK overtook the U.S. as the largest foreign market. The most popular German food product, however, remains butter which has over 7 per cent of the total UK butter

market. German cheeses are also increasing rapidly in popularity along with all types of German speciality foods, such as cooked meats and sausages. sweet and savoury biscuits and confectionery.

The growth in popularity tn

the UK of German foods in particular is even more surpriaing given that British households are spending proportionately However, the UK has already terma bave remained virtually become the largest market in static throughout the 1970s. The reasons for the growth

First, the prices or its food and drink products have become more competitive as a result of the UK joining the EEC. This meant that tariff barriers were reduced and led to a rise in domestic food prices to bring them in lire with other EEC years the high value of sterling and the low Cerman inflation rate have made German food prices even more competitive.

Second, the UK's highly efficient food distribution and retail network makes it comparatively easy for German pro ducers to penetrate the UK market. Once major supermarket multiplea such as Tesco and Sainsbury were willing to sell German food and drink products, it meant that German foods now have virtually national coverage with other grocers eager to jump on the

The third reason activities of the CMA in promoling both the concept and German food and drink in the UK and working closely with UK retailers and German food wines. In splte of the challenge of German foods, however, are processors.

Brazilian blow to Rolls-Royce

BY MICHAEL DONNE, AEROSPACE CORRESPONDENT

line, which is buying five Boeing 757s for delivery from 1983, has specified the U.S. General Electric CF6-32 engines and Pratt & Whitney, would win asles for their engines in the Boeing 757. for the airliner.

Hitherto, the new Rolls-Royce around one-third of total 757 RB-211 Dash 535 bas dominated aales with the Dash 535 engine. Boeing 757 sales, to British Airways and Eastern Air Lines.

General Electric said that it aircraft. is also now negotiating for

another airline to fit its engines. nounced that it had signed an

\$30m (£12.7m), Rolls-Royce has make under licence the GE always accepted that sooner or T-700 turbo-sbaft engine for later the other big major engine Italian and other helicopter pro-

> Reuter reports from a total 15 CF6-SOA engines to

Philippines to resume nuclear

programme

MANILA-Mr. Cesar Virata, Philippines Finance Minister, said construction of the country's first nuclear power plant will resume shortly.

He told foreign correspondents the Government was satisfied with extra safety features for the plant, to be hullt ou the Balaan Peninsula west of Manila Bay. Construction of the \$1.7bn plant was suspended last year following the accident at the Three Mile Island nuclear power station in Pennsylvania. Last May, the U.S. Nuclear Regulatory Commission granled permission for Weslinghouse Electric to export a nuclear reactor to

the Philippines. Mr. Virata said construc-tion work is expected to be completed by the end of 1984. He said there would he snbstantial overrun on costs, wbicb he estimated at between \$600m and \$700m. Earlier estimates placed the

cost of the project at \$1.2bn. He said some of the extra coat would be borne by Westinghouse, but declined to give details.

CGE wins £44m cable order

part of a 4,000-mile undersea telepbone cahle linking Brazil with Enrope bas been won by Compagnie Genercia d'Electricite (CGE), the French electrical grnnp, against strong International competi-

The new telephone system is due to go into service in PLESSEY'S ILL-FATED IRAQ BID

Executives breathe a sigh of relief

DESPITE PUBLIC lamentations demands which bave taken the responsible not only for the ment about Plesscy's apparent failure to win a \$400m contract to establish an electronics industry in Iraq, some group executives have actually been heaving a sigh of relief.

The indications over the past

week have led to the conclusion that the UK group has been thwarted by Thomson-CSF, one of the leaders of the French electronics industry, which is thought to have put together a package more closely aligned to the very strict conditions demanded by the Iraqi Govern-

Plessey's altempts to win the sibilities by providing cover contract have been accompanied over non-commercial risks. hy intense soul-searching within the group. The deal, involving construction and the supply of plant and training facilities, is but in the final analysis the different from contracts it has two sides could not find a undertaken in the past. Further, lraq is considered a difficult

But more importantly, and this was the crucial area where Plessey assume total liability Plessey's bid foundered, the for the project—that is, the lraqi Government has made group should be financially

SHIPPING REPORT

in the group have thought tolerable.

of support forthcoming from the Government in general and the Department (ECGD) in particu-

lar.
It has been evident that tho ECGD, while perfectly willing to support a commercially viable bid, was not prepared to be left holding all the financial respon-

Plessey has been in touch continually with the Department of Trade and the ECGD. mutually acceptable balance of risks and costs.

The difficulties all arose from the Iraqi demand that work in which it is directly involved hut for all the subeontraciors as well.

Springing from this the iraqis required high per-formance bonds — written guarantees supplied by the contractor for the performance of contractual obligations. But these bonds would be payable on demand from the Iraqis.

Such demands are common in the Middlo East, although the requirements in Iraq are at the stringent end of the scale. Some companies are more prepared to run the risk of the requirements than others. Plessey clearly found them iotolerable without a greater degree of official support than

was forthcoming. Plessey's needs from the ECCD ran through the normal demands for an export contractor — cover for overseas borrowings, supplier credits, Insolvency Cover—that Plessey and bonding—and then into the and ECGD appear to have special areas where the Depart- reached a parting of the ways.

involved and where the ECCD appraisals are not merely

This involves what the ECCL calls Joint and Several Cover, so far unused facility which indemnifies the main contractor when a sub-contractor defaults cent of the admissible losses up to a total of 20 per cent of the total UK value of the wbole project contract.

But the cover is expensive, carrying a premium of £2 per £100 of the total UK contract value after the deposit of a nonreturnable £5,000.

At the same time Plessey apparently sought cover against contractors. Again the premium is not cheap at 1.5 per cont a year of the maximum liability. It was on the negotiation of such provisions -Several and Project Participants

World Economic Indicators

WORLD ECONOMIC INDICATORS

			TRADE STATISTICS							
i	C1. 1				July '80	june '80	May *80	July '79		
	Slight drop in	n cast casts	UK & bn	Exports	4.032	4.010	3.973	3.600		
i	Dugit urop i	ii coai costs		Imports	. 3.771	4.027	3,991	3.600		
İ	BY OUR SHIPPING CORRESPO	NDENT		Balance	+0.261	-0.017	0.018	:0.000		
1			France Fr bn	Exports	40.974	40.763	38.328	36.296		
į	SOME OF the bloom has gone	dry cargo markets at present is		Imports	47.639	46.580	45.558	37.875		
]	off the buoyant coal trades. The	the lncrease in time charter		Balance	-6.665	-5.817	—7.230	— 1.579		
	Australian coal miners' strike	activity which indicates that			June '80	May '80	April '80	June 79		
į	continues, but heavy congestion	charterers are anxious to cover	U.S. 5 bn	Exports	18.642	17.678	18.468	15.038		
1	at the main U.S. coal port of	their forward commitments		Imports	20.922	20.528	19.308	1 6.937		
	Hampton Roads has stemmed	hefore freight rates rise		Balance	-2.280	- 2,85 0	-0.840	— 1.8 9 9		
١	the rise in freight rates,		Holland Fl bn	Exports	11.88 9	12,148	12.549	10.889		
į	jemporarily at least.	Galhraith Wrightson reports		Imports	13.543	12.672	12.693	11.189		
Ì	The Hampton Roads/Japan			Balance	— 1.654	-0.524	-0.144	-0.300		
ļ	rate has fallen back from \$27	larger sizes has continued to	Italy Lira bn	Exports	5.704	5.575	5,411	5.228		
į	per tonne to around \$26.50. This	improve and the bandy size		imports	6.715	7.088	6.921	5.223		
į	has spilled over into the larger	Atlantic tonnage has also sbown		Balance	- 1.611	-1.513	-1.510	+0.005		
i	grain carriers and rate for	more momentum. Denholm	Japan Yen bn	Exports	. 10.800	10.298	9,892	8.529		
i	50,000-60,000 tonnes have soft-	Coales reports that the going		imports	. 10.670	10.962	10.723	7.473		
1		rate for handy-sized vessels at		Balance	+0.130	-0.664	-0.831	÷ 1.056		
i	ened in sympathy. However, the		Germany DM bn	Exports	28.50	28.90	30.14	25.8		
	market is consolidating its	the moment is \$8,500-\$8,750.		imports	28.20	28.60	29.04	. 24.1		
,	carlier rises and brokers are	The Chinese continue to		Balance	+0.30	+0,30	+1.10	_ +1.7		
	not expecting it to fall much	charter tonnage steadily, but			Feb. '80	Jan. '80	Dec. 79	Feb. 79		
ł	further over the next couple of	Russian activity, according to	Belgium Fr bn	Exports	169.400	155.700	137,800	126.327		
1	weeks.	Denholm, is cloaked in "more		Imports	185,900	181.768	152,600	128.160		
i	A clue to the strength of the	than usual secrecy."		Balance	— 16.500	-26.068	—14.800	1.833		

ROLLS ROYCE has lost its in its 757s-Aloha of Hawaii, agreement with Alfa Romeo of position as the sole engino The Transbrasil deal is worth Italy whereby the latter will supplier to the new Boeing 757 twin-engined jet airliner. Transbrasil, the Brazilian air-

doing well if it can capture The total market for 757s is expected to be over 1,000

General Electric also an-

• Aosett Airlines of Australia has placed a A\$45m (£22m) engine order with General Elec-Melboure Ansett has ordered power the five Boeing 767 aircraft it has on order preference to the Pratt and Whitney engine option.

By David White in Paris

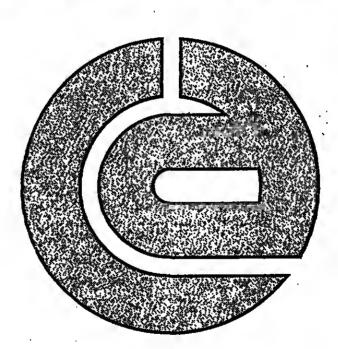
THE CONTRACT for the first

Worth FFr 430m (£44m), the contract is the biggest that CGE bas obtained in this

Australian coal miners' strike activity which indicates that continues, but heavy congestion charterers are anxious to cover at the main U.S. coal port of their forward commitments hefore Hampton Roads has stemmed freight rates rise the rise in freight rates, further. temporarily at least. Galhraith Wrightson reports The Hampton Roads/Japan that the Far Eastern market for rate has fallen back from \$27 larger sizes has continued to per tonne to around-\$26.50. This has spilled over into the larger. Atlantic tonnage has also sbown

A clue to the strength of the than usual secrecy.'

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Lister plans Bangladesh plant

BY OUR WORLD TRADE STAFF

R. A. LISTER, the Hawker siddle subsidiary, is to set up a diesel engine manufacturing plant in Bangladesb. The plant starts operation, ging rivets. The order includes will be established in pariner, but the local content of manuthe supply of production tool-ship with private sector facture is expected to grow ing for an estimated live years' Bangladesb interests. progressively. production programme.

Bangladesh interests.

Talks are taking place about Since 1976 Lister has Frederick Parker, the Leiccsthe plant's capacity, after which supplied 2,000 diesel engines to ter-based construction plant fir will be clearer what size of Bangladesh and has recently manufacturers, is to supply a investment involved. The plant will seek initially to satisfy local demand od later to sell abroad. Industries Group, has won a Orders are expected first £1.5m order from Stankoimport and later to sell abroad.

from the private sector and of the Soviet Union under

received a £2.4m order for a Avdel, a part of the Newman

order was placed by the Government Serivicio Nacional de Caminos and is being financed

COMPANY NOTICES

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LONDON BRANCH US\$ 20,000,000

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CBI close to picking Methven successor

By John Elliott, Industrial Editor

LEADERS of the Confederation of British Industry bope to choose a new director general to succeed the late Sir John Methven within the next five

A short list of about six names has been drawn up by Spencer Stuart, the company which has been searching for candidates during the past three months, and interviews are to atart

within a few days. Most of the candidates are currently working in iodustry or commerce and it seems that someone from this immediate hackground is most likely to be

This means that Mr. Brian Rigby, one of the CBI's two directors general, is not genercandidate, even though he is thought to he on the ahort list. He joined the confederation from Laporte Industries only two years ago.

Leaders of the CBI are pleased with the calibre of people on their short-list and expect to choose a candidate after interviews, which will be conducted by Sir Ray Pennock, the CBI's president, Sir John Greenborough, the deputy presideot and other senior industrialists in the confedera-

If this timetable is kept, the new director general would make his first major public appearance at the confederation's annual conference in Brighton early in November.

A salary of ahout £35,000 to £45,000 has been on offer, and Spencer Stuart has heen looking for people with proven business experience, preferably aged 45 to 50, with direct experience of working in industry, and of dealing with Government, trade unions and the Press.

Sir John Methven was chosen in 1976 to lead an attack on Left-wing industrial policies and to build up the prestige and offset the possible absence of It is argued that the rate of Capel-Cure argue that interest to interest-sensitive overseas effectiveness of the CBL any further benefits from a inflation in large countries is ratea are likely to stay higher funds held in sterling.

This time, one of the main qualifications is an ability to bridge the gulf between both sides of industry at a time when the Government and trade union leaders are not oo close terms.

Land-Rover V8 range goes on sale

THE LAND-ROVER, one of the UK motor industry's great successes, enters a new phase of its 32-year life today with the 3.5 litre V8 engloe. cormally fitted on the Range Rover. The V8 range marks the com-

pletion of the first phase of a £220m expansion programme Land-Rover, a aubsidiary of

The oew vebicle-already on sale abroad—is priced in the UK at £2,603 as a station wagon and £7,550 in pick-up form. It and several other features previously optional are made atandard. Mr. Mike Hodekinson, man-

aging director of Land-Rover. said the V8 would enable bis company to meet the demands of the market more precisely. I am confident it will enable us to consolidate nur poaition as leaders." he said.

Sales are being aimed parti-cularly at the Midnle East where both cross-country relia bility, and high performance on good road surfaces are required.

Aiwa names South Wales managers

By Jason Crisp

AIWA, the Japanese electronics company, yesterday announced its management team to run its South Wales bi-fi factory. The team will consist of Japanese and British nationals.

Production of miniature, stackable hi-fi units hegan seven weeks ago; 500 units a week are heing produced and 50 people are exployed. The factory, in Gweot, will supply all Europe and is Aiwa's second outside Japan.

In a year, production is expected to increase to 1,500 units. Aiwa also expects to start mannfacturing hi-fi cassettes there. Aiwa is 52 per cent-owned by Sony in Japan.

The company's investment in Wales is about £1m.

HTV opera AN OPERA based on A Christ-

mas Carol, commissioned and created by HTV, bas won the major television opera award in the prestigious Salzburg

An unpaid bill could further disrupt Channel ferries, writes William Hall

Writ highlights unfairness of pilotage dues

today when a writ, served on a cross-channel ferries. French ferry for non-payment of pilotage dues, expires.

The unpaid bill of £12,564 is relatively small but the repercussions could be very serioua. The ferry, the 5,475 grt Prince of Brittany, could be seized, and if this happens the owner, Brittany Ferries (which is controlled by Breton farmers), has warned that all UK ferry services into France would be

Given the tense atmosphere in the French ports at the moment, there is a danger that such a move would be regarded by the French as retaliatory action. This would worsen relations between the two countries. already strained by the French fishermen's blockade of the

However, the dispute between and the foreign ferry companies the foreign ferry companies are becoming restive about the and the UK pilotage authorities delay.

ahout the possibility of reduc-

ing the annual rate of retail

price inflation to single figures

In their latest market review,

Phillips and Drew, the stock-

brokers, estimate that the 12-

month rate will be about 17 per cent at the end of this year and

between 121-13 per cent at the

This assumes that the growth of labour costs will slow from

18 to 14 per cent over the

period, and that the mortgage

rate will decline by three per-

centage points (which alone will

reduce the retail prices index

hy 1.1 per cent).
In addition, oil prices are expected to be more stable, and

these favourable factors will

Windmill

generator

for Orkney

CONSUMERS IN Orkney are

likely to be Britain's first to receive Electricity Board power generated by windmin.

An installation could be

The North of Scotiand

operating there by Christmas.

Hydro-Electric Board has

ordered a 22kW machine from Northern Engineering Indus-

tries and will site it at a farm

Orkney, as an experiment.
If this tiny generator proves

cheap, easy and safe enough to run, the board will instal a

250 kW generator within the next two years and move to

1,000 kW machines by the

boards are planning experi-

mental aerogenerators and

there is a private installation

in Yorksuire which supplies power to the local grid. The

Department of Energy also

has a wind energy develop-

pressing ahead quickly be-

cause it helieves wind power will be particularly snitable for the Scottish Islands.

to be the windiest places in Europe, but they are supplied

at the moment by diesel

generators which are ex-

tremely expensive to operate.

To try to recoup some of the extra cost of diesel elec-

tricity the board has imposed

an II per cent surcharge on

island consumers, but this

has provoked intense rescut-

The local anthorities in the

three main island groups,

Orkney, Shetland and the

Western Isles, are raising a

court action to have the sur-

Wind generation would

of power-even in

nover be sufficient to sup-plant diesel as the main

Orkney the wind docs stop

blowing sometimes—but it

could substantially reduce generation costs. A problem

now facing the bydro board is

that there are up generators

in commercial production

which are large enough to be

nperated economically it

British companies, encourag-

ing them in develop their

nwn machines or to manufac-

ture under licence from

charge declared illegal.

Nut only are they reckoned

But the hydro board is

ment programme.

A number of electricity

mid-1980s

St. Margaret's Hope,

ordered

hy the end of next year.

end of 1981.

BY PETER RIDDELL, ECONOMICS CORRESPONDENT

tween foreign ferry companies time and it is coincidence that of companies inclduing DFDS. and the UK pilotage authorities matters are coming to a bead could come to a head later during the disruption of the

For many years foreign ferry companies have felt aggrleved by the rule that they had to take on hoard a UK pilot when entering port, while UK companies were generally exempt.

Not only did it mean that they were put at a competitive disadvantage because they had to pay more than their UK competitors, but it also endangered their tight sailing schednles if they had to wait outside port for the pilot to arrive.

The foreign operators bave heen pressing for the law to he changed so that they could be put on the same footing as UK operators. The 1979 Merchant Shipping Act does in fact provide for the granting of pilotage certicates to EEC nationals, but so far none have been issued

CITY economists are divided squeeze on retailers' profit set for only a slow decline now

cent if a single-figure inflation

rate is to be achieved hy the

end of this year. The firm says

this outcome seems most un-

In contrast, brokers James

Capel have forecast that the

annual inflation could drop to

just under 10 per cent by the

general outlook on inflation in

industrialised countries has heeo put forward in the latest

BY JASON CRISP

rival viewdata system.

Vlewdata-known as Prestel

the Danish ferry operator, stopped paying their pilotage dnes in protest at the delays in are used. issuing foreign pilotage certificates. However, after the threat nf legal action they backed down and only Brittany Ferries la still refusing to pay its full pilotage dues although it is

For several weeks the Prince of Brittany bas not paid the full £269 pilotage dues charged for each of its trips into Portsmouth. Instead, it has paid the £38 which rival UK companies such as Townsend Thoresen pay.

taking pilots on board as legally

The cheques have been returned and an Admiralty Court writ for non-payment has been served on the ship hy Trinity House, acting on behalf of the local pilots at Southampton all of whom are self-employed.

City split on single-figure inflation

Phillips and Drew say that have become firmly established.

A cautious view of the as a result of the end of the

review from Amex Bank, part supply. The outcome may he of the American Express nearer the lower end of the

A DISPUTE has broken out Canadiao Minister, has pub-between the Canadiao Mioister lished a letter he wrote to Mr.

of Communications and the Peter Bentoo, managing direc British Post Office over claims tor of British Telecom, majo-

being made for each country's taining that all three systems

in this country and as Telidon to be upset at the oublication

in Canada—Is the system which of the letter, is considering his

connects a television set via the reply, but the Post Office said telephone to a computer which the corporation stood by its

siderable wide-ranging informa. Although the existing market

standard setting hody (CCTTT) years and the rivalry between

had recognised only the two the different systems is excep-

fiercely rival UK and French tionally fierce. The key area systems. Mr. Francis Fox, the is the U.S., where the French

can give the user access to con- original statement.

pay increases would have to and food prices are likely to drop to between 2 and 9 per rise strongly.

The latest hatch of hrokers'

circulars is cautious about the

immediate prospects for the

gilt-edged market and for

Brokers Capel-Cure Myers

estimate, for example, that

further switching of banks' operations hack within

measured monetary aggregates

corset controls may add between

3 and 8 per cent to sterling M3, the broadly defined money

Prestel claim upsets Canada

had been recognised.

Mr. Benton, who is believed

In June the Post Office helieved to have enormous friction."

Youth unemployment 'growing steadily'

interest rates.

of date and irrational. They are drop and there will be less based on the premise that pilots work for Britsin's 1,600 pilots. should be paid for when they Trinity House, which is the

Shipping companies that do not need pilots on entering UK waters do not pay for them. This means that virtually the whole cost of maintaining a

viable pilotage service around the company falls on the users. This sounds fine in theory but ignores the fact that pilots have to be provided oo a 24-hour basis just in case a ship arrives In addition a handful of

foreign ferry companies are paying a disproportionately large ahare of the country's pilotage dues for a service they do not need. DFDS. for example, has been sailing into Harwich for over 100 years and its masters know the channels better than many Harwich

self-employed.

If the masters of foreign
At the heart of the dispute ferries are issued with UK
is the inescapable fact that pilotage certificates, earnings of

for longer than most observers

year if monetary targets mean

anything. Consequently, there may he only limited scope for any further immediate reduc-

tions in Minimum Lending Rate.

shank argue that to reduce the rate of monetary growth to 10 per cent a year from October

will require an aggressive fund-

ing policy with net sales of gilt-edged stock of over £600m a

The firm argues that interest

rates cannot be reduced more rapidly than the inflation rate,

against a hackground of huov

ant corporate lending, an over-ahoot on public sector horrow-

ing, and a considerable exposure

have been marketing very

Teletel, is not yet available. There are about 5,000 Prestel

in Canada believe you must have been ill-informed as to

the events which took place in

the meetings in Montreal lead-

ing to the initial agreement.

For the most part our past rela-

tions have been characterised

system or another will be deter-

mined in the market place and

it is confident Telidon will come

Mr. Fox's letter states: "We

users in the UK.

out ahead.

Brokers Laing and Cruick-

major UK pilotage authority. agrees that the rules are unfair and is working to change them.

However, it argues that the changes canoot be pushed through without the agreement of the pilots affected and this takes time. Meanwhile, the patieoce of the foreign ferry operators who believe they are being unjustly treated is fast running out.

Whatever the outcome of Trinity House's dispute with Brittany Ferries, there is a demonstrable need for com-pletely revising the system of financing pilotage in UK waters. the same dues irrespective of whether they need the services of a UK pilot. A pilotage

service has to ba provided to ensure the safety of shipping generally, and its costs need to be borne more equitably by the ahipping community.

Agriculture threatened by flower

By David Churchill, Consumer

A NEW threat to British agriculture and hosticulture is posed by seemingly harmless flowers such as chrysan-

The Ministry of Agriculture has issued a new warning to returning British holidaymakers not to return with plants from abroad, especially plants from outside Europe. "Such apparently innocent mementos," the Ministry says. "could pose a threat to British agriculture and borti-

The Ministry warus that in our conditions and ravage

"Once introduced to this country," the Ministry said, "these pests and diseases can multiply with dramatic suddenness." Colorado beetle and Dntch Elm disease, for example, were both introduced from North America. They decimated many crops

The Ministry is supporting its campaign with extensive poster advertising and distri-hntion of leaflets. But penalties for illegally importing such plants include £100 for the first offence, rising to £200 for subsequent breaches. No official figures are available to show the prevalence of gladioli smuggling into Britain. Customs officials usually destroy the plants on

the spot rather than prosecnte. All plants from outside Europe and the Mediterrancan area are hanned. But from

within Europe and the Mediterranean holidaymakers can import two kilograms of hulbs, five plants (except cbysanthemum, apple, cherry, pear or plum plants), a small honch of cut flowers (except gladioli from Malta), and two kilograms of plant pro-

pests

Affairs Correspondent

themums and gladioli.

culture.'

even apparently healthy plants and vegetables can carry dangerons pests and diseases which "could thrive

onr crops and flora."
It said many foreign pests
and diseases can prove more destructive in Britain than in

their native countries, where natural predators hold them in check.

destroyed numerous trees.

ncrease over the years, regard- July, 1979, than in July, 1973, demand for young workers, the less of cyclical peaks and troughs in the economy, accordcompared with a two-fold in-Opportunities Youth crease during the same period aramme must be retained and ing to a report published for unemployed over 12.

UNEMPLOYMENT among unemployed aged below 19 was young people is tending to more than five times greater in given the long term decline in

A particularly disturbing feature of this trend, says Youthaid, a research body

The Mannower Service Commission estimated in November.

johless, is the growing harding the solution of young, long-term unerployed. mployed. unemployment would increase Youthaid says the number of hy 125 per cent.

its quality improved. Training education opportunities must be extended for thrise 300,000-odd school-leavers whn each year enter johs where no further training or education is provided hecause new technology is eliminating these un-

Youthaid recommends that,

A flutter available in 57 varieties went into a pub, or even if they

> It is no coincidence that Boh Kitchener remembers these bets. At the first aign of a big bet be and his staff go to red alert. He has to weigh up the chances of a coup being staged or whether the punter is going to take a lot of the ready stuff

London and he is constantly on the phone during the afternoon, two places—especially in central telling them of heavy bets or winning ones.

keep a strict legal watch. "The chairs. But most offer only a law is very tight about shops, We must not have the door opeo, we can't have television and in general we can't make

He agrees with me that the British are bypocritical about hetting. Parliament has allowed betting but has done its best to election times there will be some make it a rather squalid husiness by hedging its operations with so many petty rules and regulations. "They bave attempted to make us dens of iniquity, which is the very reverse of the truth."

He thinks that sort of mud has stuck, however, among one section of the community. "Lots of women come in here hit it's mostly a male world. Women tend to think they will be conaidered 'loose' if they come in,

go into a puh on their own today.

it casy for the women. " We tend pitches and they don't like any one standing there if that's their spot. They won't go in for any aggro but they'll bump into you as you are filling out a form or nudge your arm. Little things like that."

London—where there are really rich clients, such as the Arabs,
Mr. Kitchener also has to take a chance and put in easy couple of stools, Nor has the betting altered.

There is some football, especially for big occasions such

His trade comes from the race cards and the Sporting Life is his bible. "I get all sorts. A lot of them are compulsive gamblers. I've seen some blokes look desperate at the end of the day. They must have done their wages in." It's no wonder only

prevention, or where possible, eventually reducing claims costs.

The truth is that insurers get lusurers and the premium is

Food producers shine in rising farm exports

BY RICHARD MOONEY

BRITISH EXPORTS of agricultural produce and supplies are still growing, according to figures published by the British Agricultural Export Council. In the first half of this year they were worth £1.15bn compared with £2.06bn for the whole of 1979. The council did not compile figures for the first half of last year.

If the first half performance were repeated in the second six months of 1980 the growth in value would be somewhat below the inflation rate, but British exports, particularly of produce, generally do significantly better in the second half.

Produce exports, which fell last year, showed healthy signs of recovery, the council said, with hutter and unmilled cereals doing particularly well. In other sectors seed potatoes and agro-chemicals put in good perfirm-ances. But exports by the animal feed industry were hit by the high level of the pound.

Out of the first half total exports of livestock accounted for £54.7m, produce £482m; seeds, feed, fertilisers and agro-chemicals £179.2m, fractors, engines and field machinery £340.3m and fixed equipment processing machinery and mis-cellaneous nems £97.4m. The total excluded veterinary medicines and consultancy and

medicines and consurancy and management services.

Of the produce total of £482m, the total for meat was £121.8m, dairy products £144.7m, eggs and egg products £8.8m unmilled cereals £125.7m, fruit, vegetables and flowers £22.6m, wool, hides and skins £57.7m and honey £700.000.

and honey £700,000.

Earlier last week the British Food Export Council announced that first half food exports were 22 per cent higher at £983.7m compared with the same period last year. But it noted that the performance had slackened in the aecond quarter when the total was £467m against £516m in the first quarter.

Marks and Spencer backs origin labelling

MARKS AND SPENCER, the as an indication of quality." country's largeat clothing retailer, has backed Government plans to introduce compulsory origin marking of a wide range of consumer goods. Marks' position has been made

clear in a letter to Mrs. Sally Oppenheim, Minister for Consumer Affairs, and is at odds with the official position of the Retail Consortium, the main trade organisation for the retail

The consortium describes the new country-of-origin marking proposals as "invidious" and suggests there is little support for the move

But Marks says in its letter "in our experience, an

been made, no doubt in view of

The Government's proposala for origin marking were announced by Mrs. Oppenheim earlier this year. Marks' support for the Gov-

ernment's move is made easier because over 90 per cent of the clothing, bousehold textiles and footwear sold by the company is UK-made.
But Marks points out it also exports to other companies in 38 countries. "To do this, our suppliers—who make on our

behalf—have to comply with the many different labelling require-ments of those countries in addition to labelling for our home trade.
"This is feasible and practic-

increasing number of customers able and we see no reason why want to know where goods have similar arrangements could not able and we see no reason why apply for other retailers and the growing unemployment, and importers," says Marks.

OFT completes inquiry on electricity boards

BY OUR CONSUMER AFFAIRS CORRESPONDENT

THE OFFICE has completed its preliminary investigations into the retailing activities of electricity hoard sbowrooms following allegabeing unfairly subsidised by electricity charges. But no decision is likely for

at least two months on whether a formal inquiry will he made uoder the new Competition

ouiries bave included extensive of gas showrooms.

electrical retailers and a number of electricity boards. Independent retailers have claimed that they are at an tions that the showrooms were unfair disadvantage because the operation of the electricity boards' showrooms is subsidised by electricity charges. The independent retailers believe their case bas been

strengthened by the recent Monopolies and Mergers Commission report which strongly The OFT's preliminary in- criticised the retailing practices

INSURANCE

Help for research into safety training

BY OUR INSURANCE CORRESPONDENT

ence ia improved.

Upward rate adjustment is an indirect way of hringing pressure on the policyholder to put

More directly, positive encouragement is given for 20 years or so, and last year example, on the property side, some 5,000 people participated by way of discounts from book rates for the installation of fire prevention equipment, while the costs of industrial accounts. devices the policyholder em- ence rooms are needed and the ploys have a definite bearing insurers' money will be spent on the price he paya for cover. Motor fleet operators are encouraged by insurers to give their employees safe driving incentives—to reduce claims costs and subsequent insurance prem-

iums. Motor engineers are sent to advise on maintenance Major employers' liability insurers are very concerned to see that accident incidence is reduced-they have experts who will help in analysing causes of industrial injury, and make recommendations for improved

aafety. In short much can be, and is done to reduce risk but Insurers still cannot win: the criticism is then made that

little publicity for money they ing community,

IN THEIR daily task of provid- spend in this way. This summer, ing protection against risk for for example, insurers have set premium, insurers are some aside some £350,000 perhaps times accused of adjusting rate no great sum in modern pounds, to take account of adverse ex- but still substantial in a year perience without taking positive of adverse UK underwriting resteps to see that adverse experi- sults-for safety training and rehabilitation studies.
Through the British Insur-

ance Association, insurers 218 contributing £100,000 to help his house in order, just as is the imposition of restrictions, excesses and so on, which oblige the policyholder to ahare in the rlaims he puts to the rlaims he puts to the relaims he puts to the relains he puts to the relaims he puts to the relains he puts to the relaims he puts to the relains he relains he puts to the relains he
The Centre has been open for range and quality of anti-theft Now more lecture and confer on their construction?

Through the Accident Offices Association, insurers have given the Rebabilitation Studies Unit of the University of Edinburgh a grant of £264,000. The money is to enable the unit to expand its research into rehabilitating victims of hand injuries, fractures and amoutations: the unit works with the University Department of Orthopaedic Surgery and the Bio Engineering Unit, which is one of the major UK centres for the developmen

of artificial himbs. New academic posts are to be created and nne will be to further training of orthopaedic surgeous in the management of insurers profit out of the human hand injuries. While hand suffering that still occurs and injuries account for a quarte should therefore make some of all injuries at work, man contribution from their profits, road accident victims since to non-insurance research to hand injuries as well. So the reduce that suffering, either by work at Edinburgh, hopefully by

NUCLEAR SHELTER MASS HOME DEFENCE FRIDAY 3 OCTOBER 1980 10.30-16.30 Eminent Nuclear Physicists and Engineers, Senior Service personnel with nuclear experience, and distinguished county officials will be

guest speakers.

Delegates will have an opportunity to view the DAFAL Churchill Queensbury House, Havelock Road, Hastings, E. Sussex Tel: Hastings (0424) 422545

INAUGURAL ONE-DAY SEMINAR AND EXHIBITION

Mark IV Nuclear Demonstration Shelter. Write or telephone for forms of application. S.E. Regional Head Office:

shops in the towo, the money supply figures came out, showing an enormous leap in whatever M3 is and causing consternation throughout the markets. The FT index dropped 7.8 and gilts were said to be off sbarnly Seeing the punters come in to

place their yankees, superyankees, patents and goliaths I wondered if there was any connection between the two. Certainly none the punters would recognise. But then corporate treasurers dealing in Eurodeposits almost certainly think a yankee is either a hasehall player or someone horn north of the Mason Dixon

multiples. Bob Kitchener explained to me that a vankee is four aelec-

tions split into doubles, trebles and an accumulator. A superyankee is the same, only with five selections, and a patent is three singles, three doubles and three trebles. Heaven knows wbat a goliath is but if you really want a big one there's a Heinz, which as its name suggests is 57 bets combined in some permutation which eluded me. There is also a jackpot and an ITV jackpot seven. Andover is an average sort of

town as far as betting is con-

cerned, not rich, not poor; there

THE DAY I reached Andover to is some short-time working and publicans think £20 is a very small stake. We get £100 and one of the William Hill betting and Newbury to whet the appearance of the william Hill betting and Newbury to whet the appearance of the William Hill betting and Newbury to whet the appearance of the William Hill betting and Newbury to whet the appearance of the William Hill betting and publicans think £20 is a very small stake. We get £100 and and one of the William Hill betting and publicans think £20 is a very small stake. one of the William Hill betting and Newbury to whet the appetite of the racing as opposed to the betting fraternity. Mr. Kitchener says.

My betting tends to he confined to an occasional flutter on tbe Derby and the Grand National and my appreciation of horses is strictly limited. So it surprised me to discover that most betting now is done in

"The state of the economy doesn't seem to affect things. always seem to have a het. I

sometimes wonder where they get the money from. If they are out of work it's as though they are hoping to hit the jackpot and end all their problems. It's either us or bingo. Sometimes they go from one to the

By Anthony Moreton

"Most of the customers in the the shop are really small gamhlers. They prohably put 50p on a race, a couple of quio an afternoon. A yankee might cost them £1.10 or a patent 70p."
He talks of his "customers"
and his "shop." He could be selling sweets or cappages. But I do have some hig gamblers. Several farmers and

out flinching. I did one chap yesterday with two beta of £100, one of £60 and a couple of £40.

Bets over a certain level have video screens instead of the to be referred to head office in hlackboards detailing all the

the shops comfortable.

Some of the men don't make

Since the law allowed them to operate, betting shops have altered very little. There are

It's still basically the as the Cup Final, a little cricket and golf. There was a flutter on Dallas and who shot J.R. and at political betting, though Bob Kitchener doesn't see any of it. That is invariably placed nationally.

bookies ride in Rolls. Tomorrow: Apprentices in

4 Monso

UK NEWS – LABOUR

DISBELIEF IN THE SHADOW OF CLOSURE

The 'family' mill fights to live

BY PAULINE CLARK, LABOUR STAFF

ing to keep me and that they would exploit the first the State social security coffers. Vic Bronghton, 43. and 23 years a fully-trained paper maker at Bowater's, angrily thumped the table in front of him as he sat in the bar of the Bowater social club at Elles mere Port on Mersevside.

Warned that they would exploit the State social security coffers for all they could get. At the other end of the building seven men, shirt sleeves come and the table in the growth of the section of t him as he sat in the bar of the Bowater social club at Elles-mere Port on Merseyside.

mere Port on Merseyside.

Since the company announced finally last week that it would have to close its newsprint mill there because it had failed to gain financial help from the Government, the 1,600 mill workers who have received 90-day notices of redundancy have been in a state of shock.

In other corners of the bar, small buddle of angry workers were also warning Mrs. Thatcher of what they were going to do

schoing company dance ball. The Bowater joint trade union ection committee set up last weekens as in the financial help from the Government, the 1,600 mill workers who have received 90-day notices of redundancy have been in a state of shock.

In other corners of the bar, small buddle of angry workers were also warning Mrs. Thatcher of what they were going to do

ber. True-blue Tories vowed to

Sept. 2-5 Sept. 7-12 Sept. 9-11

Sept. 9-20 Sept. 11-19

Sept. 14-17 Sept. 16-18

Sept. 11

BUSINESSMAN'S DIARY

73451) (until Aug. 29)
Current International Motor Cycle Exhibition (0203 27427)

Aug. 31-Sept. 4 ... Gilftware and Fashion Accessories Trade Fair (08833 4371)

Aug. 31-Sept. 4 ... International Watch, Jewellery and Silver Trades

Sept. 1-4 International Environment and Safety Exhibition and Conference (0727 55574)
Sept. 1-5 London Nursing Exhibition and Conference (01-643 8040)

OVERSEAS TRADE FAIRS AND

Current International Exhibition of Agriculture and Food

Current Bacie: Overseas Training Officers Programme (01-636 5351) (1974) Oct. 24)

(01-839 1233)
Sept. 45 FT Conference: The new Sri Lanka—Opportunities for Business (01-621 1355)

Sept. 7-12 Marketing Management (021 742 4141)

Sept. 8-12 IPM: The Work of the Personnel Department (01-387 2844)

Sept. 10-12 BCPA: Complete Course for Personnel Officers (01-405 1023)

Sept. 25-26 AMR International: It's about time management

Sept. 28-Oct. 3 ... AMN: International: It's about time management (01-262 2732)
Sept. 25 ... Institute of Management Services: Energy Saving in Transport and Distribution (01-363 74527)
Sept. 28-Oct. 3 ... AMD: Export Management (Windsor 56047)
Sept. 29-30 ... AMR International: Positive Discipline (01-262 2732)

Sept. 29-Oct. 2... Calus: Cost Engineering (0734 861101)
Sept. 30-Oct. 2... CPT. Public Transport in the Eighties Conference (01-831 7546)
Oct. 1 FT Conference: Financial Futures for European Institutions (01-621 1355)

(0222 492121)

(057282 2711)

(01-405 1023)
South Glamorgan Institute of Higher Education:
Financial Futures — The Cardiff Seminar

ESC: The Profitable Exploitation of Micro-processors in Instrumentation and Control

Industry-OMEC (until Sept. 4)
International Fair (until Sept. 20)

Fair (01-837 3636)

"WHAT AM I going to do if Bowy's gets the chop? I'll tell you what The Government's going to keep me and that's the warned that they would expend that they would exploit the Society of Graphical and the State and that's the society of Graphical and the State and the

of what they were going to do subsidised foreign competitors dockers, should the mili close in Novemand the strength of the pound. But what can they do? The

UK TRADE FAIRS AND EXHIBITIONS

Small Industries Exhibition and Conference (0823)

(01-643 8040)
International Carpet Fair (021-705 6707)
International Hardware Trades Fair (0727 63213)
Laboratory '80 (0799 22612)
Chelsea Antiques Fair (0727 56069)
International Printing Machinery and Allied
Trades Exhibition—IPEX (021-705 6707)
MAB '80 International Menswear Fair (01-839 5041)
Ready to Wear Fashion Fair (01-637 2400)
International Broadcasting Convention and Exhibition (01-240 1871)

trade union leaders led by Mr.

Bill Keys, general accretary of the Society of Graphical and Allied Trades (the dominant union in the paper industry), have roade energetic representations to the Government, to major customers like the Newspaper Publishers Association and to MPs. The management is not their side and to never the most important customers—the most important customers—the most important customers—the newspaper publishers—for as long as possible.

A ban on newspaper publishers—for as long as possible.

A ban on newspaper the newspaper of the newspaper publishers—for as long as possible.

A ban on newspaper the presses to a halt and jeopardise any last chance the mill may have of being saved.

Mr. Bob French, secretary of the most important customers—for as long as possible.

A ban on newspaper the presses to a halt and jeopardise any last chance the mill may have of being saved. on their side and so are their local councillors.

But their only firm date is a meeting with Mr. Len Murray, general secretary of the TUC. at the start of Congress next has members who work on news-papers as well as in paper manufecture, is particularly sensitive to the problem.

The local sbop stewards want to see netional trade union action on the problem but have now learned of the difficulties of calling formally for a national ban on newsprint imports by

The action committee is pledged to maintain "flat out"

Earls Court (until Aug. 30)

Royal Festival Hail

Grosvenor House, W1 Chelsea Town Hadl

Earls Court

Harrogate

Earls Court

Olympia

Bristol Exhibition Centre

Wembley Conference Centre

National Exhibition Centre, Birmingham

Metropole Hall, Brighton

EXHIBITIONS

Royal Lancaster Hotel, W2

University of Birmingbam

Southampton Bow, WC1

Embassy Hotel, W2

Parker Street, WC2

Stratford-on-Avon

Pall Mall, SW1

Cardiff Castle

Savoy Hotel, WC1

Horsham, Sussex

London Press Centre

Gloucester Hotel, SW7

St. Ermin's Hotel, SW1 St. John's College, Oxford

Portman Hotel, W1

Cafe Royal, W1

Edinburgh Hilton Hotel, W1

Great Western Royal Hot., W2

Uxbridge

North Sea rig supply crew settle for 27%

By Our Labour Staff

NEARLY 1.000 crewmen working on rig supply boats in the North Sea have accepted a 27 per cent pay

last month of a 24 per cent offer by the owners, in a hallot of the supply boat crewmen conducted by the National Union of Seamen.

Mr. Harry Bygete, Aber-deen NUS branch secretary. said yesterday that the offer negotiated with the representatives of eight supply boat companies would be back-dated to July 2.

It will apply to a fleet of some 80 vessels operating from the main British North Sea service and supply ports of Aberdeen, Peterhead, Lerwick and Dundee. The companies involved are members of the General Conneil of British Shipping.

The award, accepted by a four-to-one majority in a second hallot conducted by the union, means that the consolidated basic wage for an able bodied seaman or engine room man rises from £95 per week to £120; leading hand or bosun from £102 to £130; uncertificated seaman from £91 to £115; and cook or steward from £100 to £128.

The wage is the same both for the normal stint of fonr weeks on board ship and fonr weeks on noard ship and four weeks' leave. Mr. Bygate said: "It was a reasonable settlement achieved after long and difficult negotia-tions."

 The Union of Shop, Distributive and Allied Workers has protested to Mr. Bernard Lyons, chairman of United Drapery tSores, that its mail order subsidiary, John Myers, is to close with the loss of 2,000 jobs when the company could still be viable.

The union said that Mr. Lyons had told sharebolders this year that John Myers' turnover had increased 18 per cent over the previous 12

reached only two months ago. "Bowy's mill is a corner shop, if you like," says one worker. "We even adjust the machines when a customer makes a special order. You can't see a Scandinavian sitting in an office with ice all round agreeing to that" And the

Budapest Stavanger

Leipzig **Paris**

Sept. 6-9 Ready-to-Wear Women's Clothing Fair (01-439 3964)
Sept. 6-9 International Leather Week (01-439 3964)
Sept. 10-18 International Engineering Fair (01-278 0281)
Sept. 12-18 World Fair of Photography, Photo, Cine, Audiovision—PHOTOKINA (01-409 0956)
Sept. 12-21 International Autumn Fair (01-486 1951) Cologne

Sept. 16-20 International Tunnelling Industries Exhibition and Conference—EUROTUNNEL (0727 63213)
Sept. 17-26 International Office Equipment Exhibition—SICOB Basle Paris

Food Inc ducts Exhibition—IKOFA (01-486 1951)
Sept. 21-24 Hardware Trade Show (QUOJEM) (01-405 8666) Munich

BUSINESS AND MANAGEMENT CONFERENCES

mili will not close. **APPOINTMENTS**

the committee, explained: "The irony is we could not possibly

produce enough newsprint our-aelves in a country with limited

timber resources and a frec

Meanwhile, SOGAT, which

The Bowater action committee

admits embarrassment at the fact that the Ellesmere Port works itself directly imports 24,000 tonnes of Canadian newsprint through its docks to

supplement the mill's produc-

tion. If it called for national action by dockers, it could hardly allow Bowater's imports

to carry on under its own nose. But the committee has pri-

vately made known its view to the Transport and General Workers' Union that a news-print import ben would bring

home to the Government the

strategic importance of main-taining a British industry. Back in the bar, workers

were worrying about the effects on their lives if the mill closes. Mr. Broughton admitted he

would have to look eisewhere

for a job in the end. But he

would bave to start again. Even with a City and Guilds' certifi-

cate his special skills as a paper

maker were not transferable. Others who were over 50 years

of age doubted if they would

get another job in an area wbere

there is 14 per cent unemploy-

The industrial relations record

over the past three years has

been virtually spotless, they say, Productivity has increased by 17

per cent, the order books are

full and record production was

agreeing to that." And the

action committee vows that the

Senior position at James Finlay

as deputy chairman and an the GAMING BOARD until executive director of JAMES December 31 this year. Sir FINLAY AND COMPANY on August 31, having reached the retiral age of 65. From Septeminary of the Property of the Propert ber 1, Mr. S. R. Stephens is appointed deputy chalrman. Mr. Coldwell remains as a nonexecutive director.

ESI LONDON states that following the recent placing of preferred ordinary shares with institutional and private clients of Rowe Rudd and Co., Mr. R. A. W. Rudd and Mr. J. H. Carter have been appointed to the Board. ESI London is the UK suhaidiary of International Signal and Control Corporation (ISC) of Lancaster, Penn-sylvania, U.S.

owned by Bridon and Korf Engineering of West Germany: Mr. J. H. Rohde, cbairman; Mr. J. Churchfield, deputy cbairman; Mr. T. Lyon, managing director.

Mr. Allan Macpherson has been appointed managing direc-tor of BABCOCK JENKINS, a subsidiary of Babcock Power.

A new company—TOR LLOYD—bas been formed as the UK general agency for the services of Tor Lloyd AB, Sweden—the largest shipping company of the North Sea. Tor Lloyd is part of the recently restructured UK Tor Line Group of companies with various shipping-related interests. Mr. Alan G. Sinclair baa been named managing director of Tor Lloyd. He was previously a director of Tor Line.

joint managing director.

Mr. Ian Davies and Mr. Micbeel A. J. Hayden have been Micbeel A. J. Hayden have neen appointed directors of UNION-AMERICA MANAGEMENT The SCOTT LITHGOW GROUP states that two aenior directors, Mr. Hugh M. Currie and Mr. Andrew Paxton, are to

Mr. N. S. Coldwell will retire of office as deputy chairman of s deputy chairman and an the GAMING BOARD until xecutive director of JAMES December 31 this year. Sir

DOLPHIN, Brighton · based self-adhesive label printer in the Williams Lea group, bas appointed Mr. John Stark as marketing director. He was until recently executive director of P. D. Spall, Romford.

Mr. David Swinnerton, financial director of Salford Electrical Instruments, has been appointed financial director of SATCH-WELL CONTROLS, a recently formed holding company consisting of all the Saichwell comsignal and Control Corporation (ISC) of Lancaster, Pennsylvania, U.S.

The following have been appointed to the Board of ASH-LOW, the new company jointly part of the newly-formed GEC-part of Avery Co.

> The Trustees of the NATIONAL HERITAGE MEMO RIAL FUND have appointed Mr. Brian Lang as their first Secretary, from October 1. Mr. Lang is a civil servant and will be seconded for two years from the Scottish Office. He is currently Secretary of the Historic Buildinga Council for Scotland.

Mr. Brian Glbbon, regional director of Dowding and Mills (Scotland), is moving to regional director DOWDING AND MILLS (MIDLANDS). He will work alongside Mr. T. J. (Joe) Morris, regional managing director, and will assume full responsibility for the Birmingham branch from January 1, when Mr. Morris

Mr. E. J. Davis, baving reached TUDORGLASS, manufacturer the age of 60, is to retire as a of replacement windows, bas appointed Mr. Pat Hemming as joint managing director.

HIT. E. J. Davis, daving reached the age of 60, is to retire as a director of LRC INTER-NATIONAL at the end of August. He will remain, on a part-time basis, aa chairman of Irradiated Products, an LRC

* retire at the end of August.
The Home Secretary has Both bave been in indifferent extended Sir Roger Falk's term health for some time.

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CONTRACTS & TENDERS

Appears every Monday Rate £19.50

Per Single Column Centimetre

General Manager Banking

APPOINTMENTS

For a successful merchant bank in Singapore backed by a group of major European banks.

- THE ROLE is to manage and expand further the group's banking activities in Singapore.
- BROADLY BASED experience of commercial banking preferably in South East Asia is essential. A banker with proven business development and management skills is needed. A knowledge of foreign exchange and money market operation is required.
- REMUNERATION is unlikely to be less than US \$50,000 p a with expatriate benefits.

Write in complete confidence to A. Barker as adviser to the bank.

TYZACK & PARTNERS LTD

MANAGEMENT CONSTITUTIONS IO HALLAM STREET

and LONDON WIN 6DJ 21 AINSLIE PLACE

CONTRACTS AND TENDERS

SOGIALIST PEOPLE'S LIBYAN ARAB JAMAHIRIYA **Municipality of Misurata**

SEWER EXTENSION PROJECT

The Municipality of Misurata invites enquiries from specialist international contractors who wish to tender for the above work. The work will comprise of the following:

- (a) Approximately one hundred (100) kilometres of pipework and the corresponding road
- (b) Four (4) pumping stations. (c) One sewerage treatment plant.
- Contractors who are considering tendering for this project should note the following points: A fully-authorised representative of their company can, on presenting a non-returnable sum of five-hundred (500) Libyan Dinars, collect the tender documents at the Municipality of Misurata offices anytime after the 2nd August, 1980. Completed offers to be returned by twelve (12) noon on the 31st January, 1981 (or the first working day in Libya thereafter).
- The contract will be on an "All Trades" basis and the successful contractor will be responsible for the carrying out of all the Civils, Mechanical, etc. Works.
- Contractors will provide a short history of their company and authenticated certification of their experience and their ability to undertake this project. Articles of Agreemant showing the composition of the company will also be required.
- The successful tenderer will require to be registered in Libya and will also have an office in Libya. They will also be bound by the current Laws of Libya.
- The successful tenderer will be required to appoint a Libyan National Company as their
- Companies offering for this project will submit an initial bank guarantee with their offer. This guarantee will amount to 1% of their tender figure and it will remain valid for a period of 6 months from the closing date for the return of the offers. The offer submitted will remain valid for a period of six (6) months from the closing date stated.
- All tenders will be submitted under sealed cover and the name of the project, together with the contractor's name and address, will appear on the outside cover and thus any offer which arrives after the date stated will be returned, unopened, to the tenderer. If any
- tenderer so wishes they may send ONE authorised representative to be present at the opening of the offers on the 31st January, 1981.
- The successful contractor will be required to sign a performance bond of 5% of the tender amount within fifteen (15) days of being accepted. Failure to comply with risk condition will entail the forfeiture of the initial guarantee figure of 1%, stated in point No. 6. Contractors offering to carry out this work must provide a signed pledge to comply with the Arab Boycott of Israel.

MAZAGON DOCK LIMITED DOCKYARD ROAD. **BOMBAY 400 010**

INVITES TENDERS FOR SUPPLY OF SECOND-HAND "LAUNCH BARGE" BUILT 1974 OR LATER, FOR TRANSPORTATION AND INSTALLATION OF OFFSHORE PLATFORMS

in Dimensions Length: 91.5 m. Beam max.: 27.5 m. Depthy

Capsble of launching and carrying Jacket of 3000 MT size 90 m x 30 m x 30 m plus 2000 MT Piles.

Lievds/ABS/ONV for unrestricted Ocean Service in Offshere Industry. Equipment Required

Rocker Arms for edjucting centre line specing, leunching errangements, leunchweys, diesel slectric ancher winch, beliest pumps, generating set, anchers and cables.

enchars and cables.

Delivary

To be delivered to MOL in Bombey Herbour. Preference will be given to earliest evallable vessel.

Tender should be camplete with copies of G.A. line diagram, detail specifications, including make and working capacity of the carge, purspelled transfer time of 1500 ton Jacket and dock strength. Place of present deplayment to be stated.

Inspection [for review of vessel classification record, condition survey and valuation survey) will be by independent inspecting perty naminated by MOL, at seven days notice.

Que ted autright sale price should be fixed and firm until delivery of the vessel and valid for acceptance till 15th Occamber 1980.

Preference would be given to the suppliers offering autrable credit facilides, terms of which are to be clearly specified. Government to Government credit may sies be offered.

Tenderar must indicate maximum period and terms of warranty.

MOL reserves the right to eccept or reject eny/ell the bids without assigning any reason whatsoever.

Others in duplicate should be sent in a sealed cover duty superscribed

Offers in duplicate ensuld be sent in a seeled cover duty superscribed "Ref. OP/AKG/Launch Berge darse 4.8.80 due en 15.9.80" as as to reach Office of Oy. General Meneger. Offehers Project. Mezagen Oock Limited. Dockyard Read. Borsbey 400 010, India, by p.m. 13th September 1880.

EREGLI DEMIR VE CELIK FABRIKALARI T.A.S. (GROEMIR) II. KADE TEVSI PROJECT YONETICILIGI K.O.Z. EREGLI—TURKEY Telex No: 48523 ERSC TR

ANNOUNCEMENT FOR

ADDITIONAL EQUIPMENT

PURCHASES FOR THE

EXPANSION OF THE INTEGRATED STEEL PLANT

AT EREGLI, TURKEY

Eregil Demir ve Cellik Fabrikaleri T.A.S. (EROEMIR) has been granted a loan (Loan No. 1508 TU) from the World Sank to finance a major partion of the loration exchange requirements of the expansion of its integrated steel slant at Eregil.

ERDEMIR has already started an expansion oredect, which is almed at increasing its annual locale steel capacity to 2 million metric tons late 1981.

The following additional equipment is to be purchased and installed on the basis of World Bank financing and under international competitive bidding procedures:

Eight (8) torpedo cars for hot meta mixing cars), 180 MT, comprising ladie, driven unit, end spanners and trucks.

One (t) roller table, for transporta-tion of slabs loaded by overhead crafte up to larrace pusher, 32 m length, individually driven rolls.

tength, individually driven rolls.

4. One (1) roll shop equigment which consists of 1) one (1) roll grander—

56 × 12 ° size heavy dury roll grinder for het strip mit service facilities it one (1) roll inthe facilities it one (1) roll inthe facilities it one (1) roll inthe facilities it one (1) for turning 56-diameter x 68° length rolls, and ill) one (1) EOT crane—having a lifting capacity of 75/25 MT with a span of 25.7 m and with necessary equipment and accessories to handle the rolls.

Invitation to bid on the equipment listed above will be fornished only to those firms who have been previously qualified for the secrits flems to be purchased. Therefore, firms wishing to be so quaffied should commanicate in writing, in the English language

Such communication must be received at the above address no later than 15 Sept. 1980; information as to the requirements for precraimteation of bidders will be forwarded to those responding to this advertisement.

COMPANY NOTICE

SAINT-GOBAIN-PONT-A-MOUSSON
Joint Stock Compeny with a Capital of
FRF 3-465-000,000
Registered Office:
62. Boillevand Victor-Ruge92200 Neudly-sar-Solne
Trada Register: PARIS 5542 039 532 10%60NDS 1975-1980 FRP 5,000 Holders of debentures of FRF 5,000 101-1175-1980 are informed that the Bonds will be redecided, at par. In whole the Snat maturity of November 10, 1880, at the sneed of the following STROIBHHICHTS; —BANQUE NATIONALE OF PARIS — PARIS

BANQUE DE L'INDOCHINE ET DE
SUEZ-PARIS

GOLIETE GENERALE PARIS
AMSTEROAM-ROTTERDAM BANK N.V.

BANCA NATIONALE OEL LAVORO

BANCA NATIONALE OEL LAVORO

BANCA NATIONALE OEL LAVORO

BANCA NATIONALE OEL LAVORO

S.A.—BRUXELLES

S.A.—BRUXELLES

WESTOEUTSCHE LANDESBANK GIROZENTRALE—DUSSELDORF

Financial Times Conferences

DEVELOPING THE ANNUAL COMPANY REPORT

London - September 15 and 16, 1980

Mr. Tom Watts, CBE, Chairman of the Accounting Standards Committee, will take the chair at this two-day seminar which will analyse the emerging international trends in the field of annual reports, the role of the international agencies and standard setting bodies and the functions of the international accounting firms.

SPAIN AND THE COMMON MARKET — POLICY AND ALTERNATIVES

Madrid - October 8 and 9, 1980 Don Alfonso Alvarez Miranda, President of FORATOM, and H. E. Don Ignacio Bayon Marine, Spanish Minister of Industry and Energy, will discuss Europe's energy resources and how dependent Spain is on external supply.

INVESTMENT IN MALAYSIA Y. A. B. Dato Seri Dr. Mahathir bin Mohamad, Deputy Prime Minister and Minister of Trade and Industry, will give the keynote address at this major conference to be arranged in association with Bumiputra Merchant Bankers Berhad with the support

of the Malaysian Industrial Development Authority. Official Carrier: Malaysian Airline System. All enquiries should be addressed to:

Financial Times Limited Conference Organisation Minster House, Arthur Street London EC4R 9AX

Tel: 01-621 1355 Telex: 27347 FTCONF G Cables: FINCONF LONDON

30th June 1980 of Leveraged Capital Holdings N.V.

> has been published and may be obtained from PIERSON, HELDRING & PIERSON N.V.

The quarterly report as of

Amsterdam

workshops

BOSKALIS WESTMINSTER

Construction has won the nearly-£3m contract to build the

new district office and depot of MANWEB (Merseyside and

North Wales Electricity Board).

This project will he located on the Wirral and comprises

storey office block, main work-

shop, ancillary storage accom-

modation and a vehicle repair

shop complete with all serving

sign and construction of mar-ried quarters at Deysbrook Barracks, Liverpool for the PSA (valued at f846,000); housing for old people for Servite Houses (£932,000); provision of

additional spectatur seating at Liverpool Foothall Club, and for river bank raising at Wallers-cote, Northwich for ICL

design/build contract for a

warehouse complex at Abing-

don, Oxon., for storage, ship-

ping and forwarding agent,

The warehouse, scheduled for.

completion in December will

provide a new base for the com-pany's export packing division

and is designed to accommodate

filled containers of furniture, stacked three high, for long term storage, and palletised commercial goods.

Useful for

and casing

SAID to be highly resistant to fire, a Swiss-made coment bonded wood particle board is

by Mallinson-Denny (Lydney), Pine End Works, Lydney, Glos, (0594 42213).

structural steel, for use as exterior cladding, wall linings, partitions and cellings. If

necessary, it can be painted, plastered or given many other

The material is called Duri-

cladding

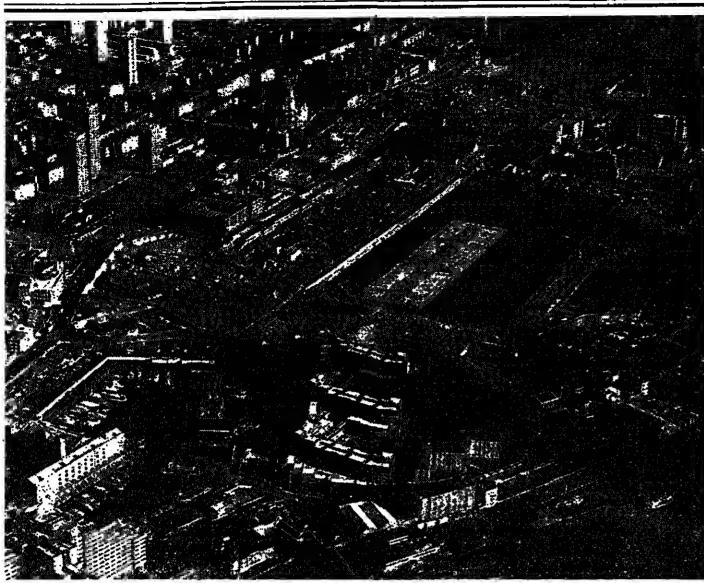
Warehouse

design and

Rob insons

Other contracts recently wenhy the company include the de-

Building and Civil Engineering



London Docks area, showing St. Katharine Docks in the foreground, the Western Dock in the centre and the Shadwell Basta' top right.

£9.7m contract to clear London Docks

WORK ON a £9.7m contract for the London Borough of Tower Hamlets for the clearance, demolition, dredging end reclamation of the dock basins of the disused London Docks, Thomas More Street, London El. bas heen started by Taylor Woodrow Construction.

MEMBER OF the William Moss

DATA PROCESSING

management

launched a new investment Eurnpe.

portfolio managemeot system.

The new system, known as

Invest 3, is thought to be of

most interest to those looking

after pension fund management

in large companies, public utilities, nnions and local

authorities — In other words any portfolio with investments totalling over £10m.

CMG claims that it is the first

system of its kind based on a minicomputer. It will be marketed by CMG City, which already markets the mainframe

based system Invest which has

been used for over 10 years by

major insurance companies handling over £15bn of stock

a manufacturing venture in

Scotland by an American

The UK subsidiary of MFE

intends to build a new mann-facturing plant in Livingston which could give rise to 200

The new drives, the MFE 700 double-density, double sided floppy disc drive and the 450C cassette drive have been

new jobs within 18 months.

peripheral specialist.

exchange investments.

of the Unilever Group.

Cannery and warehouse

EDITED BY ARTHUR BENNETT AND ALAN CANE

Investment portfolio

Invest 3.

based nn Burroughs main-frames. Last year the CMG tacted oo 01-881 7631.

designed specially for the European market. The disc drive is Rico." MFE is on 0589 410242.

U.S. FOREIGN TRADE ZONES

Attend a seminar explaining the advantages of a U.S. Foreign Trada Zone on September 9, 1980 at the U.S. International Marketine Center of the American Embessy, Grosvenor Square, London.

American Trade Zona experts will be available to discuss with you zone economic advantages for manufacturing or exporting.

can improve the profitability of your

To reserve your place; contact J. Roger McCeuley, USIMC. Telephone 01-629 4304. Telex 24-196. Attendance limited.

American business venture

New plant in Scotland

Groop, William Moss (Constructinew cannery and warehouse at tion) bas announced the award Worksop, Notts., and work .s of a major contract, valued at expected to take about 18

£41m, by Batchelors Foods, par months with completion

quantity surveyors are Burrell, Hayward and Budd The contract calls for the

removal of silt and unsuitable material from the Western Dock and Shadwell Basin, then the re-filling of the whole of the Western Dock area, to make

Consulting engineers for way for new housing. Shadwell the project are Ove Arup and Basin is to be partly filled and Partners, and the chartered made sultable for use as a water recreation centre.

Building demolition material from the London area is being processed on site by large crush-ing machines end will be used

Jetties, storege vaults end

similar structures which form part of the original dock facili-ties will be demolished. Additional work will include the bay and upgrading of neighbouring ing all roads and construction of a new fittings. link road, construction of ma.1 drainage systems, including an outlet ioto the River Thames. Work is due for completion in

Several awards to Millard

This involves erection of a new cannery and warehouse at Worksop. Notts, and work .s expected to take about 18 months with completion scheduled for spring 1982.

ABOUT £1.4m worth of condition worth of conditions with completion scheduled for spring 1982.

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ABOUT £1.4m worth of conditions with conditi

Over £10m worth to Laing Offices and

TWO CONTRACTS just awarded presently trading next to the

known as the St. George's constructed. Centre, this will be built on the site of a former car park at Bath Street, Gravesend, Kent, and the precinct will have a gross floor area of almost 400,000 square feet

Marks and Spencer, both under-Lyne Lancashire.

to John Laing Construction are site, will have extensions to protogether worth £10 m.

Larger project is to be hullt to be huilt for J. Sainsbury. at Gravesend, Kent, for CIN Mothercare, Boots the Chemist Properties (Coal Board Pension and W. H. Smith, and more than Fund) and is worth £9m. To be 30 smaller shop units are to be

Contracts for an industrial: extension and office accommodation are worth more than the construction of a three-£1.3m and are respectively for Tetra Pak at Wrexham, North Wales and the National Union British - Home Stores and of Public Employees at Ashton-

Pipelaying by Biggs Wall

TOTAL AMOUNT of work extensions to the refinery main, recently awarded to Biggs Wall a mains and service laying twn and Co., is worth just over £5m and includes a placking conand includes a pipeline conand includes a pipeline con-struction, gas mains and service stallation for Southern Gas at laying contracts valued at about Princes Risborough, Bucks.

23.2m. British Pipeline Agency has

Work in this category covers also awarded a contract for the two contracts for steel pipe-relaying and realignment of lines at Greenwich in south-east 17.5 km of 250 mm welded steel London end one at Ockham, pipelines, valued at about £1m, Surrey for South Eastern Gas; to be carried out in the Stoke a scheme for North Thames Gas Gifford, Castle Combe and at Beckton, east London for Chippenham, Wilts. districts.

Contracts for Lelliott

RESTORATION AND refurbish- protected during alterations, ment of a Grade II listed huilding (8 Clifford Street, Loodon W) is included in contracts worth about £2.6m just an-

nounced by John Lelllott. Built in 1719, the huilding is to be restored for use as offices under a contract worth £850,000 from Trust Securities Holdings. The front will be restored and refurhlshed in the historic character of the original and

and later fully restored. The company will start next month on the construction of a six-storey office at City Road, London EC1 under a contract valued at ahoot £1.5m. Work has started on demoll-

to be carried out in the Stoke

tion, alteration and extension to offices at Portsmouth Roed, Thames Ditton, Surrey which, when completed in the spring of next year, will provide office old wood panelling and artwork and showroom accommodation on walls and ceilings will be for a new BMW dealership.

New jobs in north-east

A TRANSPORT DEPOT for ground floor and four upper Hartlepool Borough Council with a contract value of £838,000 heads a list of new johs just won in the north east of England hy Rush and Tompkins. This covers construction of a maio hus garage with valeting bay and ancillary rooms including all finishes, services and

Under way in Ridley Place, Newcastle upoo Tyne for New England Estates is an £835,000 town centre project comprising an office block with hasement,

Three other projects are all

for technical users and include a £275,000 technical support building at Washington, Co. Durham for Phillips Electronics; a £305,000 operational depot for Northern Gas at Blythe, Northumberland; and work is already in progress on an extension and alterations to existing laboratories at Stockton on Tees for Davy McKee (Oils and Chemicals).

IN BRIEF

Duke and Ockenden (Mowlem tract from Thames Valley and Aldersbot Omnibus Company. A £1.3m contract has been pleced with Marryat Jackson Norris for mechanical building services work on the new New-

ham Hospital, for the North East Thames Health Authority. • INSTRUMENTS

Passes the acid test

Northampton have introduced a of a pH unit, and at the top of new range of hench top pH meters to complement the company's range of smaller portable resolution to pH meters recently announced. of a pH unit.

There are two standard versions, the M7 and the M7E which are claimed to be accurate to plus or minus 0.03 of a pH unit. As an added honus, they will meesure voltages in the display.

range O to plus or minus The meters are complemented 1400mV. There is provision for recorder output and the meters combines in one unit a measurewill operate off AC line voltages or DC internal hatteries.

There is a more accurate compensator. series, the F7, F7LC and the Horiba will provide more F7AD which are claimed to details on 0604 65171.

the line there is the supersensi tive F7SS wblcb is capable of resolution to plus or minus 0.005 Horlha claims the meters are

virtually maintenance free: the F7LC incorporates a digital readout, while the F7AD affords both analogue and digital

hy a single pH electrode which ment electrode, a reference electrode and a temperature

Easier to read pressure

Actuated Controls of Bristol.

Manometer was designed in Bristol and is manufactured at its Hartcliffe Way factory.

A MANOMETER which indi- water: 0-2, 0-5, 0-10, 0-20, 0-40 cates pressure on a dial rather than as a liquid level in a glass tube has been introduced by Actuated Controls claims that all its models will withstand an Its L3DK Dial Indicating overload pressura of 120 in. of

The price of the manometer ts £15,00 as a oneoff. There would The unit bas a 3 in. diameter be discounts for orders in scale, and can he provided in the following ranges in inches of Controls on 0272 667581.

IN THE OFFICE Speeds the flow of mail

IT IS claimed that up to 200 microprocessor

26731).

It will handle envelopes ranging from 3½ by 5 in. to 13½ hy
13 in., although there is an adaptor which will extend the A conveying and stacking unit.

envelopes a minute can be devices which will count the sealed and franked by the latest piece of office equipment to be produced by Pitney Bowes, Tha Pinoacles, Elizabeth Way.

Harlow, Essex CM19 5BD (0279)

microprocessor controlled devices which will count the items processed, remind the operator when the date needs changing, signal when the water supply for envelope sealing is running low, signal when the pattern table to the controlled devices which will count the processor controlled devices which will controlled the processor controlled devices which will controlled the processor con running low, signal when the paper tape roll (for franking) needs replacing and indicates

size up 13; by 17 in Envelope can be supplied with the thicknesses can be from 0.007 machine to receive the sealed to ½ in.

The machine is equipped with

and franked envelopes when maximum apeed is used.

Ovens have longer life

aluminised steel cladding is claimed to provide the ovens

from modular panels weighing 500 kg maximum. Each consists of a substantial metal section framework clad on both sides with aluminised steel and

ningfield), Rettendon Common, a fully automatic programme Chelmsford Essex. Use of controller. Before ignition of the burner, an exhaust fan operates for a pre-determined with a longer working life purge period to dispel solvents; than that of many convenents. This time is established when the oven is commissioned following study of the users

CRENDO The right way to build

FACTORIES OFFICES

& WAREHOUSES RENDON CONCRETE CO. LTD Long Crendon Bucks, Tel: 208481.

Farrow gets work in London

TWO CONTRACTS with a combined value of £1.3m have been placed with a Lovell construction company, Farrow Construction.

Work has started on the

larger of the two projects which comprises the erection of eight warehouse units, each with integral office accommoda build award

HEWGATE has won a £im design/build contract for a value is £900,000.

A single-storey day care centre is to be built at Wink-field Road, Wood Green, London, for physically handicaped adults. When completed it will accommodate catering facilities. occupational therapy units, specialist hobby areas and quiet

Hangar and workshop

AN aircraft hangar and work shop is to be built at East Mid-lands Airport, Castle Donington, near Derby by Fairclough Build-ing. The contract is worth fim.

The hangar, which will be used mainly for the repair and now being marketed in the UK maintenance of Boeing 707. Jets, by Mallinson-Denny (Lydney), will have a wide-span cantilever roof 17 metres high. The steel. frama exterior, clad with metal bonded sheets, will match an

panel and is available in thick adjoining hangar.

nesses ranging from 6 to 40 mm
in 2600 by 1250 and 3100 by
1250 mm sizes. It is suitable for service vehicles. A large concrete apron for aircraft, access roads and car park for service vehicles are also infor cesing and thus protecting cluded in the 35-week contract, on which work is now under

 Cartem (Kent) has win a types of finish.

Mallinson-Denny says the bitumen storage and heating material has been tested to tanks and associated pipework.

British Standard 476, parts 5, 6, and equipment for a foad conand 7 and that manufacture will struction project being undereventually be undertaken at taken in Iraq by the Fujita

Corporation of Tokyo. PERKIN ELMER Computer Systems Division MANAGEVIENT

SYSTEMSFOR THE 80s SLOUGH 34511

NEORIMATION

ERKIN-ELMER Computer Systems Division

Acad

Irea --

DREDGING

New service set up

THE J. J. Henry Co., Inc., of Moorestone, New Jersey, and Seadrec of Paisley, Scotland, have formed a joint venture company to provide dredge designs, detail construction drawings, associated engineering services, and dredge confirment to clients throughout the U.S.

and Canada.
The new company is called Amalgamated Dredge Engineering and its corporate offices will be located in the Moorestown office of J. J. Henry with additional premises within the Seadrec offices at Independent Square in Philadeiphia.

CONFERENCES Design of dams

THE INSTITUTION of Civil Engineers in association with BNCOLD and SECED and sponsored by UNESCO has mganised a conference on the design of dams to resist earth-quake.

Over 30 papers are to be pre-sented by authors from the UK, Yugoslavia, Belgium, Switzer-land, Italy, Japan, Argentine, U.S.A., Peoples Republic of China, Greece, Portugal, Mexico and India

SILVERMINES

The Stock Exchange has been advised by Silverminess Limited that its Registrars due to a computer error incorrectly issued 85 share certificates when despetching shere certificates for the 24 million shere issued in the recent Rights Issue.

Letters to those who received the certificates in error have been despetched advising them that the shere certificates is used are of no commercial value and seeking their return.

intending purchasers of the shares should. If in any doubt concerning the veilidity of the share confictus, contest the company's register at Dublin, Ireland

• TIMBER echnical News Gets more out of the sawmill

A COMBINATION of laser and microcomputer technology has been used to increase the yield from British sawmills.

A new cutting system called LOCAS (Laser Optimiser and Gant Alignment System) has been developed by the Princes Risboroogh Laboratory of the COMPUTER MANAGEMENT group turned over ahout £15m GROUP (CMG), the Provincial Insurance Company and Computer Automation last week UK and one of the top 12 in Building Research Establish-ment which looks as if it might generate new income of up to UK and one of the top 12 in £100,000 a year for medium aized aaw mills—that Is mills Computer Automation is the dealing with up to 20,000 cubed metres of softwood a year. UK suhsidiary of the American mioicomputer company; its

The UK imports most of its Commercial Systems Division softwood but an increasingly markets the SyFA minlcom-puter systems which are the important proportion—now up to 10 per cent—comes from Brihasis of the Invest 3 developtish forests. Gompared with timber from North America or Scandinevia, British timber is irregular in cross section and somewhat bowed and twisted. The Provincial Insurance Company developed its own interactive portfolio manege-

ment system on a SyFA computer using a development of In consequence, although CMG's Invest 2 hatch bureau there has been a lot of activity system, and it is this system directed towards developing which will be marketed as computer aids for more effective timber sawing, they are generally more applicable to The package will run on a generally more basic SyFA Junior with 64K American and hytes of memory, 32 megabytea wood. Scandiaviao

Laser beams

cMG is one of the UK's display units. There is also a major bureaux with particular interests in husineas computing using a wide range of bardware. Its chief bureau operation is Keith Mann and Nigel Smithles of the Princes Risborough Lahoratory bave de-veloped a system which depends on medium power laser heams to determine accurately the shepe and cross section of a log to be sawn and high speed computing techniques to tell the nperator the hest way of A NEW floppy disc drive and plug compatible with Shogart a new cassette drive will be drives. The cassette drive will take Philips data cassettes.

The constraints Mr. Maun and Mr. Smithies worked under were set by the proprietors of the saw mills themselves — and the timber business is one of least technology conscious log is ready for final cutting.

Britain. They system bad to The operator knows from the in Britain. They system bad to installed without major

years and to have little or no effect on the throughput of

which enalyses and huilds a model of the cross section of the log as it enters the mill. The lasers were supplied by Plessey, as was the high speed microcomputer which processed the results of the laser acan. Built to Ministry of Defence standards, the Miproc microprocessor Plessey supplied was the ooly 16 bit micro which could do the job when the prototype was being constructed, according to Mr. Maun.

timber. There is some controversy
What they did was to develop
a system of three laser beams the saw mill — the sefety

micro

The log is then sawn using a

double slabber saw provided by Steoner of Tiverton in Devon and the resulting parallel sided

alteration to the mill itself, to cut the log; laser beams are repay its capital cost inside two agein used in the cant alignment aid to set the log in the hest position for aawing.

espect is heing investigated by the Government's Harwell lahoratories, Mr. Maun points out, however, that the beams scan the log extremely rapidly and when not in use they are jacketed giving maximum safety. Princes Risborough will be

demonstrating the system in use at the saw mill of John Gordon and Son on Navember 6 and 7. Those interested shruld contact Miss Diane Poole on Princes Risborough (084 44

The lahoratory is looking for manufacturers who might make the LOCAS machinery under licence. There has already been computer analysis how best to some interest from abroad.

factured of Salem near Boston, Massachusetts and in Puerto Rico. Mr. Lahti said: "With a European customer hase giving Makes strong and even thread us \$5m worth of business by the end of this year, it is no longer feasible to satisfy demand from

used in this country to produce low cost and high speed. an even and very strong thread. The new yarn is helng pro-

duced by a comparatively new

company called Remora Textiles of Leicester (0533 885746). tex method of spinning. What soft. happens is that the molten polymer forming the hasis of the he interested in the production yarn is extruded through a jet detail that the yarn is produced

CANADIAN TEXTILE special-Bohtex yarn has the appear- clear that machines using Bobists have developed spinning ance of conventional yarn, but tex yarn can be run at higher machines that are now being can be produced at relatively speeds and efficiency.

usual bulk and stiffness, Remora gauge machines should be able The process is called the Bob-Knittiog manufacturers will

Chief interest in the new yarn

And although one might think is in 5 and 10 gauge single jerthat the method of manufacture sey and in inlay fabrics while would produce a yarn of unfat knitters with 5, 7 and 10 sewn garmeots. Remora believes the yarn may be ideal for the balf-hose trade.

Remora invested about £1m in and wrapped round with e in large knotless packages. As the Canadian technology, he-sheath of conventional fibres knots may well damage needles lieved to be the first of its kind before it has time to set. or other knitting elements, it is in Europe.

• HEATING

tional hox ovens. The ovens are constructed

A RANGE of re-circulating, opening doors are secured by gas-fired hox ovens has been cam-operated fixing rods, developed by Maywick (Han-

work loading.

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According tn Mr. William

Lahti, managing director for

MFE Europe, the new plant marks the beginning of a push

MFE's kit is at present manu-

for more business in Europe.

The temperature range is suitable for most commercial finishes with curing temperatures up to 200 degrees C, but lined with mineral wool to higher tempereture can be progive insulation. Twin fully vided if needed.

and India.

MANAGEMENT

EDITED BY CHRISTOPHER LORENZ

A toy baron tries to get back on the rails

Richard Beecham is picking up some of the pieces of his lost toy empire. Arnold Kransdorff reports

RICHARD BEECHAM, one of British industry's more forceful-personalities, is a humbled man. In the old days his opinions, always readily available, would be compusively optimistic — a characterstic many observers said was a prerequisite for sur-vival in the highly entrepreneurlal toy industry.

Crkin Grrong

He has always been ambitious but in trying to extend his empire too quickly, only tripped himself up. He came to grief in the highly competitive U.S. market after trying to integrate two expensively-acquired aub-sidlaries. The end came because the holding company took on too many commitments and loan guarantees in relation to the size of the UK businesses. Today, the former boss of Dunbee - Combex - Marx, which

crashed last February with debts of more than £18m, reckons he is a wiser man. "It taught me to recognise my weaknesses," be says. "I now realise that I lacked the skills of a financial controller and I was constantly euphoric."

Armed with this newly acquired wisdom he plans, Phoenix-like, to rise from the asbes and launch bimself back into industry, a move which is similarly being planned by DCM's other former managing director, Basil Feldman.

The two men, at whose doors lies the responsibility for DCM'a demise, are now separately huying up many of the fallen giant's profitable UK subsidiaries, and will run them as private companies.

Both men are being inde-pendently backed by consortiums which include blue-chlp names like Industrial and Commercial Finance Corporation (ICFC), County Bank and Electra Investment Trust.

Although both men have chalked up the most spectacular failure in the toy industry since Lines Brothers collapsed in the 1960s, they are among a small band of entrepreneurs with vast experience and contacts in the sector. Beecham, especially, is a highly respected marketing

has bought three DCM sub- invested £250,000. Beecham's siadiaries, namely Burbank Toys, Combex and Pedigree Toys, Combex and Pedigree Dolls and Toys, the latter being the plum of the package. Burbank makes soft toys and Mickey Mouse products. Com-bex also produces soft toys as well as nursery toys and house-

the Sindy fashion doll, a UK

Academic

market leader.

Together they probably turned in pre-tax profits of around £2m during their peak year of 1978. Beecham is not specific but aays he paid "more than £7m" for the package. 'We bought none of the liabilities, only the assets," he reveals. For the moment the new ven-ture is operating under the of what happened they are name of Tamwade, an off-the-ahelf company, but this will be changed when something more suitable is thought of.

Feldman's consortium is shortly to finalise the purchase of DCM's DIY and industrial division known as Martlet, which made profits of £1.2m in 1979. This part of the business is thought to have cost roughly

Both deals bave been conducted against the background of competitive interest from other parties. For Beecham, the question of

wbether he should be buying up parts of the defunct company he once headed is purely academic vailing conditions in the toy once headed is purely academic.
'I can dehate it at length but from my point of view I have heen able to persuade my backers to put money up front. At the end of the day the Receiver is legally hound to accept the best offer for the creditors. In this case I am confident we paid the top dollar, perhaps up to £1m more than the next highest bidder.

see no conflict." Beecham's backers, like Feldman's, include both individuals and institutions, none of which had any interest in the old DCM.

STATE OF PLAY WITH THE OTHER SUBSIDIARIES OF DCM UNITED KINGDOM

Rovex, of Ramsgate (Hornby, Scalextric)—still in the hands of the Receiver. Could cost pur-chaser up to £12m.

Jean Sorelle, of Peterborough (bathroom toiletries)—sold to a company run by Mr. and Mrs. Robin D'Abo and Mr. Robin Gunn, for an undisclosed sum. Hammant & Morgan, of Watford (control systems)—still in the hands of the Receiver.

Louis Marx and Co., of Swansea (guns, friction toys, Play People) ---still in the hands of the

Novo Toys and Sino Toys Developments, of Maxey, near Peterborough (two companies set up minister old mould sales to USSR and China)—still in the hands of the Receiver.

Lidrana Pty, of Australia - in

Schuco Spielwaren, of West Germany and DCM Depreux, of Belglum and Dutch subsidiariessold to toymakers J. W. Spear for an undisclosed sum.

NORTH AMERICAN DIVISION Aurora activities—sold to a consortium headed by a Canadian

Louis Marx Co. Inc., of Stamfordstill under Federal Court jurisdiction. So far \$8.5m stock and equipment has been sold-\$1.5m to Mego Corp. and \$7m to Empire of Carolina Inc. Further \$5.6m machinery and patents expected to be sold shortly to Aurora purchaser. Remaining assets could he worth up to

Hong Kong subsidiaries-in Ilquida-

toy company called Mego have each put up £500,000, In bCM acquired from the liquida-addition three Dutch families, tor of the Lines Brothers group. through a newly-formed comhighly respected marketing pany called Fiooro, have put up £1.3m, while a South African lndustrialist, Mr. H. Malhin, has own commitment is £500,000 although he has an option for a further £300,000 of equity in about three years' time.

Once that option is exercised director and chief executive of Tamwade, will become the largest individual shareholder. This will eventually give him an extra measure of authority but in the meantime, with the lessons of DCM still clear in their minds, the consortia

members have opted for caution and limited Beecham's powers to something resembling close supervision. Under his new contract

Beecham will bave to get approval from both the sharebolders and the board for all acquisitions; disposals and major property deals and capital quite right to curh my powers," comments Beecham. "In the past my decisions were never questioned. I welcome this opportunity to have my decisions subjected to scrutiny."

Under an independent chairman (still to be named) Beecham will lead a board consisting of nominees from ICFC, County Bank and the Dutch company, and Mr. Malhin. It will also have on it the manag-lng directors of Comhex and Pedigree, Ralpb Stevens and

Ken Edey.

By his own admission
Beecham's joh is going to be industry-the worst for many

Orders at the important toy fairs in January and February were disappointing and in the run up to Christmas 1980, many toy outlets are asking the manufacturers to hold on to existing orders for another three months because of lack of storage apace. Aside from flat demand, the high level of interest rates has been a crippling blow; because of its bighly seasonal nature, the toy industry bas to manufacture ahead of the winter they can now keep - at least festive season, when around 60 for a little while.

Basil Feldman (left) and Richard Beecham in happier days. The two former joint managing directors of Dunbee-Combex-Marx are now going their separate ways in buying up the profitable parts of the failed toy giant. Beecham is especially anxious to get his hands on Rovex. which makes Hornby trains.

per cent of production is sold. This becomes costly when stock

this background Against Beecham's first management decision has been to transfer Burhank's manufacturing operation at Wellinghorough Pedigree's factory in Canter-hury and to Combex's unit at Peterborough. The Welling-brough premises will be used exclusively as a warebousc.

For the future Beecham Is surprisingly positive given his recent experiences. In spite of difficult trading conditions he still asserts that he can achieve pre-tax profits of more than film the end of December and £1.75m, on sales of around £20m, for a full year—a profit figure only about £250,000 less than these companics' peak performance in 1978. Pedigree, he saya, has confirmed orders of around £15m while Combex should contribute another £5m.

Clearly, Beecham is anxious to show his backers that he can produce the goods, and so strengthen bis case when be asks for funds to eoable him to expand.

Beecham admits to being as ambitious as ever, and part of this compulsion is an obsessive desire to get control of Royex, the jewel of the DCM group. At its peak in 1978 the company, which makes the famous Hornby trains and Scalextric model car racing systems was probably earning £4m pre-tax.

But there has been no shortage of Interest from potentor of the Lines Brothers group, Among others, Ladbroke Group, Brent Walker, GEC and General Mills (the U.S. toy company) have all made approaches to the Receiver at DCM, so Beecham is naturally apprehensive that Rovex will be snapped up by someone else.

"I nave to waik a tightrope," he says anxiously. "My hackers want me to prove myself or tore they are going to commit alemberves to such a big investment. It is possible that I win he in a postuou to make an offer in several munitus'

Longer term Beecnam-uke Feldman—wants to return as a public company and quotes a three-to-five year time span. Feldman is less specific, saying he has "no deadline."

Estranged

The two men, who have worked logether for 32 years— Beecham is 55, Feidman 54-... Decome increasingly

years attuough their dinerences have been kept private. 'they give a clear impression of renef at not having to work together any more.

Feldman is less forthcoming about bis plans but equally positive about the outlook. He points out that as part of DCM, Martlet, whose husiness includes plant hire, caah-and-carry wholeasling of D-I-Y products and the distribution of vinyl sheeting and plastic pro-ducts, had "never had an independent identity."

His backers include Martlet's management team of Peter Lewis, John Carlton, Steven Fearson-Wilson and George Burnett, ICFC and Electra Investment Trust. Feldman will be chairman with Lewis as chief

Both Beecham and Feldman are clearly very keen to return to the main-stream of husiness life. Being the enterprising characters they are it is unlikely they will disappear from view but, with hoth running private companies, they will no doubt reliah the low profile



Some signs of concern over dulling of demand in Japan's economy emerge

Business activity in Japan has shown steady growth since its gross national product (GNP) for the January-March period of this year increased by 1.8 per cent over the preceding period of last year - an annual increase of 7.2 per

The surplus in current accounts supported by increased exports and decreased imports in quantity accounted for the 1.8 per cent increase. Domestic demand made no contributions to the GNP

Sluggish growth in private housing Investments and suppression on public works combined to choke off the growth in . business plant and equipment and private inventory invest-

The outlook for the nation's economy seems to remain unchanged. However, some signs of apprehension add up to affect future demand trends as (1) consumer prices remain unpredictable, (2) production activities are on the downward trend, (3) personal consumption growth has been offset by price increases and (4) overseas markets are unfavorable for exports.

Wholesale prices of finished goods are on the rise

The important points of price development at present are concerned with the future trend of wholesale prices of the finished products and consumer

After wholesale prices dropped by 0.2 per cent in May from the previous month and 0.1 per cent in June, they went up by 0.5 per cent in early July from late June. Although prices of domestic goods continued to rise, wholesale prices dropped in May and June because prices of exports declined due to a higher appreciation of the Japanese yen while prices of imports dropped due to calmness in the market conditions for raw materials.

The reactionary rise of late July ia attributed among other things to the lull in appreciatioo of the Japanese yen, price in-crease in finished products mostly of consumer goods, and temporary increase in the electricity rates for the summer.

The quotation of marketsensitive commodities showed a softening trend in March and April due to a fall in market prices for raw materials in overseas markets. Reflecting the revaluation of the yen and easing off of supply-demand situation, market prices dropped in May for many commodities, including steel, nonferrous metals, lumbers, oil and chemical products.

Meanwhile, the upturn trend of Tokyo consumer prices has gradually declined as the in May, 0.1 per cent in June. and 0.2 per cent in July over the previous month, reflecting the price decrease in seasonal commoditles. However, the rising trend of

consumer prices continued for the last six months starting this February with an eight per cent rate of increase being maintained against the corresponding month of last year. It is particularly notable that

the composite index, in which seasonal goods are excluded, ahowed an increase of 8.8 per cent during May and June this year compared with the corresponding months of last year and 8.5 per cent in July, nearing the nine per cent level. We should not overlook the

fact that prices of industrial products are rising as prices went up by 7.1 per cent in March over the corresponding month last year, 7.9 per cent in April and 9.6 per cent in May. Market prices of com-

modities are expected to shift to a bearish tone, considering calmness in overseas markets and subdued production activities. With the crude price hikes likely to be compensated by the

yen's revaluation, the wholesale prices are most likely to be pushed up by the rising prices of finished products.

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The outlook for the wholesale prices does not warrant ontim-

sumer prices, and the overall price developments now face a Some shifts in production activities According to a survey on the

in prices of finished products in

the past. The prices of finished

products are also affecting con-

HORNBY RAILWAYS

trend of mining and manufacturing production in May, the industrial production dropped by 1.2 per cent in May over the previous month while the shipments of industrial products were down by 2.8 per cent and

the stock of the products in-

creased by 2.9 per cent. The trend in each industry look for production activities is not necessarily on the growing tone. That is to say, production activities in most of the industries, except for precision instruments, electric machinery and non-electrical machinery industries, declined in May. Particularly notable is that the production in transport equipment industry such as automobile manufacturing declined

sharply in May, 6.8 per cent

down from the previous month. The declining trend in production activities stems from (1) the reactionary move of the last-minute production for the Jan-March period just before the power rate hikes, (2) a concern for a future drop in demand for exports to be caused by stagnant overseas business particularly a sharp decline in U.S. economy, and (3) the declining tone in the com-

modities markel. The future trend in supply-demand situation is a source of concern. The private bousing investment has been sluggish as the number of new home buildings during April and May this year was about 10 per cent less than that of the corresponding period last year. The finance-related demand has also lost strength as the public works are restrained to a large extent.

Although plant and equip-

ment investment by private companies is growing smonthly

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at present, the future trends in year respectively. On the basis personal consumption and exof volume, the exports inports must be carefully wat-

Price increases eat up the consumer demand

According to the GNP statistics, the private final consumer spending for January-March this year showed a steady increase, up 0.7 per cent in real terms over the preceding three-month period (Oct.-Dec. 1979) during which the Increase rate was 0.2

The consumer-related index then shows that the average outslanding balaoce of Bank of Japan notes for April-June this year increased by 8.8 per cent over the corresponding period of last year. But this is less than a 9.8 per cent increase shown during the preceding January-March period of this

The sales of large-scale retail stores were up 9.0 per cent in April and 10.7 per cent in May over the corresponding months of last year. And yet, the sales growth rates still lower compared with the 12.8 per cent increase shown in the Jan. March period over the corresponding period of last year.

Consumer spending of total households, according to a family income and expenditure survey, went up by 6.8 per cent nominally in April over the corresponding month of last year. In real terms, however, consumer spending dropped by 1.5 per cent for the first time since August, 1978.

Consumer price hikes (up 8 per cent over the previous year) have been gradually holding down the growth of household consumer demand."

The sales of durable consumer goods, such as household furniture and automobiles, which had shown a steady increase, have begun to fall below the level of the previous year, reflecting a sharp decline in personal consumption.

Possible worsening situation in overseas market for Japanese

Exports, which play a major role io leading the nation'a economy, have been doing well so far. Customs cleared exports on the hasis of dollars went up by 26.8 per cent in April, 27.2 per cent in May and 26.9 per cent in June, compared with the corresponding month of last creased by 26.2 per cent in April. 19.7 per cent in May, and 16.9 per cent in June over a year ago. However, overseas markets

are rapidly becoming unfavorable for Japanese exports in . view of (1) the recent U.S. husi- ness recession and apprehension for a worldwide stagnant business condition, (2) various trade frictions between Japan and the U.S. or European countries and (3) higher yen quota-

Export letters of credit received based on dollars, a leading indicator of exports, increased by only 6.4 per cent in June over a year ago, which is a sharp decline from the 19.4 per cent increase of April and 18.3 per cent of May.

Cautious steps must be taken in carrying out economic policies

As has been shown, price increases held down the demand for personal consumption and the demand for exports faces Increasing uncertainty in the future. The basic trend of monetary stringeocy must be maintained so that the final demand, including personal consumption will be kept firm.

Organization for Economic Cooperation and Development (OECD) predicts that the real economic growth rate of the 24 member countries will be at an annual rate of minus one per cent (-1 per cent) for the latter half of 1980. Such an apprehension for worldwide stagnant business conditions may adversely affect the business sentiment of private companies since production and equipment investment activities are largely supported by export-related industries.

The outlook for the plant and equipment investment by business companies cannot remain optimistic in the future. With price conditions at

present facing a crucial moment, there should never be major changes in government economic policies which focus on curbing prices. As the stagnant world's business conditions become still worsened, Japan may face dull demand in future. In this sense, the new govern-

ment will have to make a severe choice in its policy maneuvers while trying to rehabilitate the nation's financial

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The Government's 'creatures'

BY SAMUEL BRITTAN

pressure group and have ing he treated as an instrument drummed up an astonishing of fiscal and monetary policy? amount of journalistic sympathy for their campaign to free themselves from Government restrictions.

The whole campaign suffers If full commercial freedom is the best way to operate an innationalising it at all.

Industries were nationalised because of a bellef that for one applicable and state intervention was required. This belief may have been right or wrong. But it is paradoxical in the so long as the state stands by its dehts; and any fixed interest capital raised is rightly treated as part of government because in the state stands by its dehts; and any fixed interest capital raised is rightly treated as part of government because in the state stands by its dehts; and any fixed interest capital raised is rightly treated as part of government because in the state stands by its dehts; and any fixed interest capital raised in the state stands by its dehts; and any fixed interest capital raised is rightly treated as part of government because it is a specific raised in the state stands by its dehts; and any fixed interest capital raised is rightly treated as part of government because it is a specific raised in the state stands of the state s reason or another normal profitextreme, first to nationalise them, and then for their stateappointed managers to ask for the full freedom of operation of private enterprise. A donkey does not become a zebra if stripes are painted on its hack.

that some otate industries remain oationalised merely because they could not find a buyer at a "reasonable price." This means that private enter-prise would see little profit in operating some concern at anything like its present capacity. but that it is still supposed to be

A normal private enterprise company cannot do what it likes hecause it has to survive in a sible to claim that they are Sir Der regulated by the market when Parker. the state guarantees their debts poly power or subsidises their

that the borrowing of nationalvestment more than it resembles mean it too.

(Ultra high frequency only). 10.00 Noah and Nelly in Skylark. 10.05 Jackanory. 10.20 The Perils

of Penelope Pitstop. 10.40 Take

Hart. 1.30 pm Trumpton. 1.45 News. 2.50 Dechrau Canu

Dechrau Caomol (Welsh hymn-

the Planets. 5.00 Newsround. 5.10

5.55 Nationwide (London and

South East only).

Stopwatch. 5.35 Fred Basset.

THERE IS one group of people spending on pensions or the struggling to be free who health service. If private condeserve limited sympathy. I cerns can vary their horrowing refer to the chairmen of the according to their own commer-nationalised industries, who can judgment why should have become a very effective nanonalised industries borrow-One reason has already been mentioned. There are few nationalised industries where decisions are purely commercial and do not depend on monopoly The whole campaign smers power. Even if money is raised from a philosophical confusion. on the market to finance an ancillary activity, which appears dustry, there is no case for commercial and competitive, this releases funds for other things. Moreover nationalised industry government borrowing is simply another form of gilt-edged issue

The concessiono, allowing excess horrowing in one year to be offset by undersbooting in another, recently announced by the Treasury go to the very limit of what is prudent. State indusoes not become tripes are painted on its hack. try managers who want more Nor is it an answer to say freedom ahould lobby for these lat some otate industries reactivities to be sold off to the private sector.

Danger area

Of course improvements are possible. But they must be argued on their merits and not by appealing to the Govern-In the national interest to keep ment's supposed principle of non-iotervention, which can have oo application in this sector.

wages rather than investment. competitive market. Govern-Some state concerns can pay ments are checked by the need to face the electorate. Why onlistically, their charges to the then should state industry consumer. It may or may not he chiefs regard themselves as a lesser evil to do this to escane feudal barons checked neither industrial stopnages. But the hy the market nor hy the political process? For it is impossible to be ministers and not by market nor hy the political process? For it is impossible to be ministers and not by made by ministers and not by ministers and Sir Derek Ezra or Sir Peter

and in many cases confers mono- ernment intervention in these industries—such as holding The immediate grumble is of living index - has been perised industries is governed by fault was one of economic policy an "external financing limit" and not the sin of intervention. akin to the cash limits for other Cripps once said that the Bank government spending. Invest- of England was "my creature." ment in new coal mines or cross- Sir Kelth Joseph and his colchannel ferries, it is said, re-sembles private enterprise in-other nationalised industries and

6.20 Medic 1-6.

The present danger area is

Of course, a great deal of govdown prices to massage the cost verse in the extreme. But the

(Leeds, Newcastle); Look North-

6.40-7.55 am Open University. 11.00 Play School

cluding a news summary with sub-titles for the hard-of-hearing.
7.30 Live from the Proma
(simultaneous hroadcast

with Radlo 3 in stereo)

VIII. 10.30 Festival 80 from Edin-

hurgh. 10.55 Newsnight.

other. 4.15 The Sooty Show. 4.45 The Square Leopard. 5.15 A

7.00 The Krypton Factor Final. 7.30 Theatre Royal. 8.30 Robin's Nest.

11.00 Border Country.

12.10 am Ckpse: "Sit Up and Listen" with Delia Smith who reads from the Scriptures.

Ali IBA Regions as London xcept at the following times:

ANGLIA

10.00 am Tuesdey Merning Film:

Cagtain Namo and the Under Water

10.00 Border Country.

110.00 am "Thay Met in the Oark," attarning James Masson and Joyce Howard.

12.30 pm Againat The Wind.

City." 11.45 Cartoon Time. 12.30 pm Against The Wind. 1.20 Anglie News. 5.15 Happy Bays. 8.00 About Anglie. 12.10 am The George Hamilton IV Show. 12.40 Eest Anglien Pilgomage.

10.00 em Cat in the Hat. 10.30 The Space Movie: "Stowewey To The Meon." 12.30 pm Ageinst The Wind. 1.20 ATV Newsdesk, 5.15 Mr. and Mrs.

BORDER 10.00 am Treasures in Stere. 10.25 Redgeuntlet. 10.50 Portroit of the Artiet. 11.05 Reses Crickst. 1.20 pm Serdet Naws. 2.50 Roses Cricket. 5.15 Reses Cricket. 6.00 Leokareund Tuesday. 12.10 am Sorder Naws

CHANNEL 12.30 pm Ageinst The Wind. 1.20 Chennel Lunchtime Newe, What's 0n Where and Weather. S.16 University Challengs. 6.00 Chennel News. 6.10 Look Who'e Talking (Sendy Pewell). 10.28 Chennel Lete News. 12.10 am Goerge Hamilton IV. 12.35 Cemmentaires et Previsions Meteeralogiques.

GRAMPIAN

9.25 am First Thing. 10.00 Treasuras In Sters. 10.25 Redgauntlot. 10.50 Pertrait of the Artist. 11.05 Terzan. 12.30 om Ageinst The Wind. 1.20 North News. S.15 Merk and Mindy. 0.00 North Nows, Farming News. 6.15 Fanglace fellowed by Aras Weether Forecast. 12.10 am Reflections. 12.15 North Headlings.

GRANADA

10.00 am Henry Ford's America.

10.55 Reses Cricket—Lenceshire v.
Yerkshire Iram Old Trefford. 12.30 pm
Ageinst Tho Wind. 1.20 Granade
Reports. 2.00 and 3.45 Reses Cricket.
S.15 Resea Cricket. 3.00 Granade
Regerts News. 0.05 Time 0ff. 6.20
This Is Your Right. 6.25 Take My
Wils. 12.10 am Jezz Cencert: Humphrey
Lyttelten and his Jand with Marian
Montgomery.

22C Radio London: 1458kHz, 206m & 94,5vHf

(6). 11.30 Liazt Pisne Music (S).

BBC Radio London

Capital Radio

A CURIOUS thing about sherry mauvais quart d'heure before wine from the Pedro Ximenez be less strong than here. is that while entirely dry when the procession formed for the grape will have been added: These days, however, the made, the great majority is dining room. But champagne about 5 per cent for "medium" decision as to whether the wine sweet when drunk At first sight was then usually drunk during sherries and amontillado, 15-20 is going to be a Fino or an per cent for tha creams. Cheaper

Fino at its driest and finest

Oloroso is often taken hefore tha grapes are pressed, dependsherries will be sweetened by less expensive grapes, and given ing largely on the origin of the additional colour with wine that grapes, and perhaps on the age of the vines. Certain districts has been boiled to concentrate make better Finos, others are As is well known, basically more suitable for Olorosos. there are only two types of Those nearest the sea in Bil- to firm. While Sandeman's probably the result of including sherry: Fino and Oloroso, bains are thought to make the

BY EDMUND PENNING-ROWSELL

who have been nffered sweetish although there is a rarity, Palo best, freshest Finos. Manzanilla sherry on the Continent will Cortado, which in style is from around Sanlucar de Barra-between an Amontilladn and an meda, just near the aea, is really Oloroso. A good deal of play a very crisp Fino. Slightly Even today the general estimate is that only 10-12 per cent has been made in the past about further inland is Macharoudo, of sherry consumed here is Fino, and not all of that will be hone the "mystery" as to whether a celebrated for its Olorosos, but butt of sherry will turn out s. also producing Fines, while dry, as are such wines as Gon-Fine or an Oleroso. The former Cariscal, deeper in the country, go. zalez Tio Pepe, Garvey'a San The negative reason for the Patricio, Valdesplno's Innocente, "grows" a film of yallowish- is for Olorosos. white yeast cells, called flor, that covers the surface of the wine in the butt and prevents sweetness of most sherry is pro- Sandeman's Innocente, La Riva's Tres Palmas and Domeco's La largest market, it was not Ina, which used to he alightly thought of as an aperitif or presweeter here than in Spain, hut prandial drink until comparation is now identical everywhere. the air getting to it. The latter shows little or no flor, and to prevent any developing, the wine is immediately fortified tively recently, but as a be-tween-meals drink, like Madeira. Oloroso, a sherry producer's For up to 1914 there was no chief pride is in his Fino, and np to a strength of about 18 per that the rare Palo Cortado,

Now that the wine is increas-

inly fermented in stainless steel has greatly reduced the uncertainty as to how a particular Indeed, there are those who say For up to 1914 there was no chief pride is in his Fino, and cent, whereas except for an which only turns up in one out pre-prandial drinking, although this is what he himself will drink extra dose before shipping of perhaps several thousand daily, although much of his Finos are only increased to 15 hutts, has almost hean eliminor of the sherries, to which some sweet Fino drunk in Jerez is likely to that it can take up to two years which only turns up in one out

to detect a butt of Palo Cortado I myself have found it worthin the bodega, and this is while when opening a bottle of scarcely commercial these days, top-class Fino straight away to

the solera system, by which tapered cork. sherry after a year or so in Those Who like a Fine that cask, the anada stage is fed is perfectly dry but more full. into the "nursery" (criadera) bodied than some may choose series, called scales. These La Fiva's Tres Palmas or Don may vary in number from firm Zollo Fine. This quality is Apitiv Fino passes through rather older wines in the blend. three scales, and Genzalez Personally I am inclined to Tio Pepe four, Valdespino's prefer, at least for summer Innocente takes five to six drinking, the younger Finos, agyears and Garvey's San Patricio they are very refreshing. seven to eight. It will be appreciated that as no more than a quarter or a third is withdrawn at a time from a cask it is impossible to give accurately tha age of a sherry, and these figures are approximate. It is from the final, solera, stage that the wine is drawn off for bottling, and it

remains constant. is delicate in aroma, light, shipped in bulk an authentic elegant and crisp on the taste. Manzanilla will remain fresh elegant and crisp on the taste. Manzanilla will remain fresh That is why, in my view, it is for 12 months. has become oxidised especi-Fines are served in half-bottles, money.

Readers of this column will pour half into a clean halfbe aware of the operations of hottle and stopper it with a

Manzanillas are particularly attractive, though because of their lightness and, as some sevowing to the proximity of the sea near which they are matured; their saltiness, they eas prone to oxidation when opened. There are even those who chainis the special quality of sherry, that they must be drunk on the that provided not to much is spot. However, I was assured withdrawn a year from a in Sanlucar itself by the disquality in each replenished butt tinguished firm of Barbadillo. celehrated for its Manzanillas The great aim in producing that if properly bottled and it. Fine is to evolve a sherry that should he done there and not.

a pity to add any sweetening. These top-class Fines are Some find a really dry Fine likely to cost between £2.50-£3 too bitter, and its floweriness a bottle, and in terms of their extended, expansive method ofally in hars and restaurants; production and fine quality, which is why in Jerez hars thay are excellent value for

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8.15.

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2.59, 3.50, 5.55, 8.25;
2.59, 3.50, 5.55, 8.25;
2.58, 3.50, 5.55, 8.25;
3.50, 5.55, 0.25;
4. AIRPLANET (A), Prost. 1.00, 3.15,
5.35, 8.00.
5. THE LORD OF THE RINGS (A) Sex.

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. Itali ere

Gerren w

Piggott aiming for a double

this looks like another of those the meal or, as it still is in

Thereafter the sherry aperitif

party, said to have been devised

hy Carl Williams of Williams

and Humbert, only caught on in

the late 1920s, and was to a great extent a by-product of the world

slump, when cocktails had

hecome ton expensive for most

people. Although Garveys claim

to have invented the name Fino

and sent a consignment to Dub-

lin in 1823, completely dry Finos

have only been consumed in

Britain on any scale for the last

40 or 50 years; and certainly sub-

stantially nowhere else, as those

almost certainly confirm.

wine scandals so popular with France, with the dessert, the public In fact, traditionally.

Thereafter the sherry a

sherry as consumed throughout

the world, and not least in

Britain, has always overwhelm-

ingly heen sweet: that is

In the 18th and 19th centuries

the fashionable sherry was East

India, implying that it had tra-

velled and metured in the bot-

toms of ships trading between

Britain and India. Like its rival,

Madeira, it was sweet. So was Golden and Pale Golden that

formed tha hulk of the 5,000

dozen in the Royal cellars sold

off hy Edward VII on his acces-

sion in 1901. And Old Brown hung on at least until World

War IL Indeed it is still avail-

able, but now such wines are

for the most part creams, the

original of which were created

in Bristol mora than 100 years

hably that in Britain, always its

THERE IS no faster-drying rode one of the most polished course in the country than and economical races I have Epsom, and following further ever seen from him on stableuninterrupted coupled with a drying breeze, dayo ago, to lauoch Susarma the ground will be riding firm on a winning run close home.

hetter ouited by the conditions

RACING

BY DOMINIC WIGAN

than Susarma, whose task under 10 st io the Paddock Stakes would almost certainly have proved insurmountable had the ground come up soft. be should be given acother Now that he has the going to chance to show his undoubted offset that formidable weightsteadier and the additional advantage of a small field. which seems to suit him hest, this time, Scobie Breasley's top weight will take a tremendous amount of heating.

sunsbine, mate Sanu at Goodwood three If successful the ex-American No animal is likely to he grey colt will be recording his third success over this, arguably, the fastest five furlongs in the world. A second likely winner for Piggott io the Robert Arm-

strong-trained juvenile Zerxes, among the runners for the Ladas Maiden Stakes, Although this colt was disappointing at York six weeks ago when ooly fourth hehind The Quiet Bldder, Rushmoor and Shotgun, ability on a totally contrasting track, where Piggott will, hope-fully, not adopt waiting tactics

While Piggott Is hidding to add to his score at the scene of so many of his moot memor-I expect Lester Piggott, who able triumphs, Carson and

Eddery will be vying for honours at Chepstow. There, stable companions Briar and Cymbal are likely to maintain Carson's momentum.

Briar, not seen out since an

unexpected failure at Newbury on her racecourse debut early in the summer, will need to produce only a degree of what she has ohown at home to lift the Castle. Maiden Stakes; while Cymbal ought to have matters very much her own way in the Ferry Stakes now that the field has cut up.

EPSOM 2.09—Murmansk 2.30—Cavalry Twill 3.05—Susarma***

3.40-Harvester Solar 4.10-Simla 4.45-Zerxes** CHEPSTOW -Hyacine

2.45—Briar* 3.15—Another Sam 3.45—Marstain 4.15—Chads Gamble

4.45—Cymbal

SCOTTISH -10.00 am Treasures in Sters. 10.25
The Lost Islands. 10.50 Portrait el the
Artist. 11.05 Yeung Ramsay. 11.55
The Bubbiles. 12.30 pm Ageinst The
Wind. 1.20 News end Road and
Weethat. 5.15 Pepeye. 5.20 Crossteads. 8.00 Scotland Today Nows end
Festival 80. 6.30 Sounds Geelic. 10.35 Encere for the Arts. 12.10 am

SOUTHERN

6.20 Crassraeds, 6.00 Rsy ay Ray Including Southapert TYNE TEES

9.20 am The Good Ward, fellewed by North East News, 10.00 Gaorge Hamilton IV. 10.25 Once Upon A Circus. 10.55 Roses Cricket. 1.20 pm North East News and Lookaround. S.15 Roses Cricket. 6.00 North East News. 3.02 Crosaroads. 6.25 Northam Life. 12.10 am Next Step Sayond. 12.40 Have Yau Ever Had a Vision? ULSTER

10.00 am Tressures in Store. 10.25 Redgauntlet. 10.50 Pertreit el the Artist. 11.05 Roses Cricket. 1.20 pm Junchtime. 2.00 and 3.45 Resse Cricket. 4.13 Ulster News Headlines. 5.1S Cartoon Time, S.20 Crassroads, 0.00 Ulater Television Nsws. 2.15 The White Line. 0.30 Sygones. 10.29 Ulater Westher, 12.10 sm Zedtime.

WESTWARD WESTWARD

10.00 am Survival. 10.25 Redgsuntist.
10.50 The Werld el Wizarde, 11.50
Cartoonlime. 12.27 pm Gus Heneybun's
dirthdaye. 12.30 Againet The Wind.
1.20 Westward News Headlinee. 6.16
University Challenge. 0.00 Westward
Diary. 10.31 Westward Lete News.
12.10 am Geerge Hsmitton IV. 12.35
Faith For Life. 12.40 West Country
Wealher ond Shipping Forecest.

YORKSHIRE YURKSHIRE

10.00 am abbel Yemen. 10.25 Cornic
Stories. 10.30 Jabberjaw. 10.55 and
12.30 pm Reses Cricket (Mike Cerey
and Fred Truemen commantating on
today's pisy Irom 0ld Trefford). 1.20
Celender Nows. 3.45 and 0.10 Rosse
Cricket. 5.00 Celender (Emley Meor
and Selmont editions). 12.10 am Run
Fram The Merning.

5.00 am As Redie 2. 8.30 Rush Heur. 10.03 The Yony Slackburn Telephons Programme. 1.03 pm Londen Live, 4.30 London News Besk. 8.35 Music On The Mevo. 7.03 9lsck Londenere. 8.00-5.00 am Join Radie 2.

London Broadcasting
5.00 am AM—Deugles Moffit and
Alen King. 10.00 Srisn Hayas. 12.00
1.90 Reports. 8.00 pm After Eight
Speciel, 9.00 Nightlins. 12.00 L90
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F.T. CROSSWORD PUZZLE No. 4.357

1 Insignificant amount marine decrease (4, 2, 3, 5) 10 Save up space for the rest of the motorists (3, 2)

11 Retreat from catty persecu-

tion in Cornwall (9) 12 Backsliding to right? Please adjust (7) 13 There's mayba still me to inform incorrectly (7)

Thatcher (5) 16 Bound to embrace a Turkish leader who's indehted (9) 19 Left pudding as too sugary

14 Craftsman not employed by

26 Stay on pitch by railway (5) 22 Has a go at giving food to the French (7)

25 Lord that io right before this 27 Mail a lord might deliver to 21 Chap from the minster, beast (9) perhaps, that hatsman may beast (9) 28 Curtain for doctor to copy

29 Expel the OBEs on trans- 24 Shots enabling Sarah to win forming local centres of 5-0 (5) communication (9, 5)

DOWN 5hade (5, 4) 3 Foot the hill for salary increase (3, 2)

5 Stalk tug going by Maiden-

6 To the other side of showplace, we hear, by mistake 7 All right to enter the day hefore call up (5)

8 Want student newsman to be 9 Drink to Cambridge college hefore tea (6) 15 Stole stock in saddle and

managed to procure (7, 2) 17 Inflamed chap quita a few consider supple (9) 18 End tenancy during teabreak (9)

19 Survive tenth to go at Lords find awkward (6)

23 Showed on left of animal (5) 26 Travelled round wild west

show (5) 2 Magnificent earsman in the The solution to last Saturday's prize puzzle will be published with names of winners next Saturday.

8.30 Potter .. 9.00 News. 9.25 Ladies from Hell. BBC 2

6.40-7.55 am Open University follows:

singles). 3.25 Home on Sunday with Roy Mason. 4.13 Regional News for England (except London). 4.15 Play School (as BBC2 11:00 am). 4.40 Battle of

Northern Ireland News. 5.55-6.20 Scene Around Six. 11.25 News and Weather for Northern

East (Norwich); Look North

10.15 Play for Today.
11.25 Weather/Regional News.
All Regions as BBCI except as

11.25 News and Weather for

Weather for Scotland. Northern Ireland—4.13-4.15 pm

Scotland—1.25-1.30 pm The Scotlish News. 5.55-6.20 Report-ing Scotland. 11.25 News and

6.50 Elvisi "Roustabout" with Barbara Stanwyck:

BBC Cymru/Wales — 1.30-1.45 pm Heads and Tails. 5.10-5.40 Yr awr fach. 5.55 Wales Today. 6.20

Ireland: England-5.55-6.20 pm Look.

west (Manchester); Midlands
Today (Birmingham); Points
West (Bristol); South Today
(Southampton); Spotlight South
West (Plymouth).

4.50 pm Open University. 6.55 To Catch a Trout 7.20 Mid-Evenings News in-

8.35 My Music. 9.00 The Six Wives of Henry

LONDON

9.30 am Afloat. 10.00 A Big Country. 10.25 World Famous Fairy Tales. 10.40 Young Ramsay. 11.30 Bailey's Bird. 11.55 Mr. Magoo. 12.00 Paperplay. 12.10 pm Pipkins. 12.30 The Sullivans. 1.00 News plus FT Index. 1.20 Thames News. 1.30 Crown Court. 2.00 After Noon Plus. 2.25 Racing from Epsom. 3.45 Tell Me An-

Sharp Intake of Breath. 5.45 News 6.00 Thames News. 6.35 Crossroads.

9.00 ITV Playhouse. 10.00 News. 10.30 Girl Talk. 13.00 Border Country.
13.10 am Close: "Sit Up and Listen" with Delia Smith who reads from the

except at the following times:

Radio Wavelengths 3 1215kHz/247m

& 90-92.5vhf stareo 200kHz/1500m 4 a 92.95vhf

RADIO 1 Naad. 9.00 Patet Powell. 11.00 Gave Lee Travits with the Redio 1 Roadshow, 12.30 pm Newsbeat. 12.45 Paul aumett. 2.00 Andy Poables. 4.31 Richard Skinner. 7.00 Parsenel Call. 8.00 David Freeman. 9.50 Newsbeot. 10.00 Jehn Peel (S). 12.00-5.00 am As Radie 2.

5:00 cm News Summery. 5:03 Steve Jonse (S). 7:32 Ray Meore (S). 10.03 Jimmy Yeung (S). 12.03 pm Inavid Homilton (S). 2:03 Ed Stewart's Request Show (8). 4:03 Much Mere Mueic (S). 6:03 Beb Kilbey (S). 6:02 Hoersy For Hellywood. 9:02 Glamerous Nights (S). 2:55 Sports Insek. 10.02 Windsor Osvice Presonts . Tho Multi-National Eisteddled Show, 10:30 Those Magical Mevio Mesicals: "Screege," starring Albert Finnoy. 11:02 Sports Ocek. 11:03 Srisn. Marthew with Reund Midnight at the Edmburgh Fastival, including 12:00 News. 2:02-0.00 am Yeu and the Night and the Music (2).

(6). 11.30 Liszt Pisne Music (S). 12.10 om 32C Wolsh 2ympheny Orchestre—Part 1 (S). 1.00 News. 1.05 Six Continents. 1.25 32C Welsh Symphony Orchestre—Part 2 (S). 2.18 Imeges of Inchussy (S). 3.00 8BC Concert Orchestra (S). 3.55 Dichtstliebe (S). 4.25 Jazz Today (2). 4.55 News. 5.00 Msinly For Pleasure (6) († and meno enly from 9.20). 7.00 The Festivel Scene (Bernard Levin teports from Sayreuth). 7.30 Prems concert—Part 1 (S). 9.35 What The Papers Said . . 8.55 Proms— Part 2 (S). 9.40 Ooctar Fischer of Geneva by Graham Greene. 10.10 Pagenini (S). 10.35 The English Ayre (S). 11.00 News. 11.05-11.15 A Debusey Premiere (S).

VHF only — Open University 6.00-7.00 am and 6.20-7.00 pm and ler students in Redio Scotlend and Redie Cymru areee only: 12.00-1.00 am.

Finnoy. 11.02 Sperts Oesk. 11.03
Srisn Matthew with Reund Midnight at the Edmburgh Fsativel, including 12.00
News. 2.02-0.00 am Yeu and the Night snd the Music (2).

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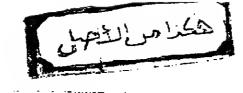
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EDINBURGH FESTIVAL

Il Matrimonio Segreto

by DAVID MURRAY

Perhaps the opening of old Gerooimo (Saeden, e Cologne Opers's Cost fan tutte cultivated bass, impeccably here last week was comprofunny and gentie) to secure here last week was compro-mised by the usual difficulties the marriage of an English attendant upon squeezing into milord to one of his daughters; the King's Theatre. On Satur-day no visible sacrifices were the other, who is secretly wed required in their production.

Cimarosa's Secret Marriage, for whom Geronimo a community which went with unfaltering sister yearns—and the firm's cash-flow depends on her. With required in their production of fections from the cast, but the producer Michael Hampe bas staged the opera for the Drottningholm Festival too, and was able to summon Eric Saeden and Peter Christoph Runge from his Drottningholm cast to fill tha roles with prac-It was a performance to per-

A. S. S.

strade one that in Matrimonio Segreto Cimarosa, Mozart's Neapolitan contemporary, really wrote a light comic masterpiece to match and even excel those of Rossini. With the Scottish Chamber Orchestra in superior form, John Pritchard discovered timing in the score (much more string-centred than any but the earliest Mozart, but teeming with invention). I had not paid proper attention to this music pefore; perhaps it needs certainly deserves—a production as freshly, mischievously observant as Hampe's.

the other, who is secretly wed already to Geronimo's assistant, tast-now depends on her. With the expected succession of contretemps Hampe finds a further level of snappish family comedy, and characters elaborated beyond Cimarosa's quick sketchea. There was a memorable breakfast of concealed cross-purposes with the sisters and their difficult aunt (warm, full-blooded strack from Marta Szirmay). Runge, who reliabes some vocal graces that recall Hermann Prey, guyed his vacillating milord less, probably, than the libretto expects, and remained marginal to the domestic imbroglio.

American The American Barbara Daniels made a suitably dangerous unmarried slster, and Krisztina Laki lent ber fresh soprano to the secret bride. As ber husband, David Kuebler proved to be an enormously accomplished comic actor as well as a clear and stylish tenor (with exemplary Italian dis (with exemplary Italian diction). This is s first-class Festival offering, and it ought The plot concerns the efforts somebow in he got to London.

Dingley Hall

by GILLIAN DARLEY

Every year the prospect of By phasing there has been an keeping a great bouse in family added advantage, since the occupation becomes increasingly apecialist builders and craftsimpossible. More and more dis- men have been able to follow tinguished bouses are being each other round from stage to added to the alarming list of stage. deteriorating mansions — given up by their owners, unwanted century wing. Since it was a shell Martin was able to insert

sance of Dingley Hall, just out- allowing for far greater freedom side Market Harborough on the Northamptonshire horder, is of the case within the circummore than passing interest scribed spaces of the original in-Vacated in 1960, the house went terior. That formed a single rapidly downhill. The owners family bouse, the first of the rapidly downhill. The owners sold the surrounding estate, but kept the honse and parkland. Dingley Hall, a romantic amalgam of a 1550s house (suparimposed on an earlier castle) with an immaculate classical addition by Hugh May, deting from 1680, was stripped, Despite its etatus as a Grada I Beted its status as a Grade I listed building, a scandalous desecration took place; roof slates, principal timbers, staircases and interior fittings, all went.

wrong. Large flats in s country setting have proved to be extremely popular; small units interior fittings, all went.

When Kit Martin, who works with architect Bob Weighton in Cambridge, came upon the house in the mid-1970s it was a - shell. The 16th century part of the bouse—the gatehouse and the wing behind it in particular -- was in dire structural condionly the principal lnad bearing walls still instact. Martin was not slow to see the potential of Dingley Hall, but time, in the shape of the rate of disintegration of the fabric, was not no

Dingley Hall, in addition to its 16th and 17th century elements also had been given sizeable 19th century additions. As expressinn of the last major, confident, change carried out the Victorian wing wss symbolic. However, for Martin's purposes was impracticable. first move was to render the house feasible for conversion into a number of self-contained

house and flat units-therefore removal of the undistinguished service wing was inevitable. While the position of the in which the conversion should take place, the condition of the ing the exercise himself, as well as designing it—there was nn Council

For this reason the renais- a complete steel structure of design than would have been ten units within the Hall itself (there is also a separate single storey unit). Now five more families are in, another unit is sold and the last phase, three heuses in the central wing, will shortly begin. Oddly, as the houses and flats have come on the market, all the old says from the estate sgents have proved

The besuty of the house, with its immaculately restored gardens and parkland (which will be maintained as a joint responsibility of the residents'), and the quality of the restoration, design and workmanship have tion. The rest was a shell with meant that there has been no wbatsoever finding

> general Various emerge from the story of Dingley Hall. One is that the splitting of a bonse, provided it is carried out with a proper sensibility to the character of the architecture, need in no sense tamper with the integrity of the building. Where Martin bas divided wings, vertically or borizontally as the case may be, the entrances bave been kept together on the eastern courtyard side. The plan of the honse, two The courtyarda back to back, bas assisted this arrangement. The grandeur of both sonth and west

fronts remains intact. Another point is that withnut the limitations of internal features, conversion is made easier. Both on historic and remaining internal walls to a spatial planning grounds there large extent dictated the way are fewer potential obstacles. As are fewer potential obstacles. As a self financing project, the phasing bas made great sense; but Martin feels bitter over the building dictated the way in but Martin feels bitter over the which the phasing should oper ubstacles and procrastination ate-for since Martin was financ- raised by both local plannars the Historic Buildings The building fell



Cathedral treasures

by ROY STRONG

This Thursday will see the opening of a festival in Cathedral entitled Flowers and Treasures. Over tbe flowers I do not intend to linger, but for a few brief days the nave, aisles and chapels of this venerable building will be the setting for strangements of garden flowers by groups repre-senting parisbes right across the Few sctivities are more typically British than the transformation of an historic environment into a bomage 10 Flora. The explosion of blossom, however, signals the inauguration of a cathedral treasury in the crypt below the Lady Chapel.

Few movements bave been more important in the last 30 years than the establishment of treasuries. They owe their initial impetus to that doyen of the bistory of ecclesiasticsl plate, Charles Oman. In bis classic book, English Church Plate 597-1830 published in 1957, he wrote:

It would seem well worth the foundation of diocesan museums such as exist in many continental countries. to bring into the light of unnsed and unseen. Many their medieval treasuries which could be brought up to date with regard to security without much trouble.

Such treasuries, be goes on in say, would not only attract viaitors but make the clergy. especially those of the younger generation, aware of their responsibilities as custodians of works of art.

That this idea found fruition was enetirely due to a bappy combination of circumstances that brought together the author and the Rev. Peter Hawker in creating one at Lincoln in 1960. More significantly the enthusism of Mr. George Hugbes persuaded the Goldsmiths Company to finance it, and thus began the very important contribution by that company to the setting up of them throughout the cathedrals of England. Their help bas varied from total subvention to a contribution which bas made such a venture

posaible. In the case of Hereford an initial grant of £5,000 enable the appeal to get off the ground. Their interest too has ensured in many instances the use of distinguisbed designers, in par-ticular, Alan Irvine and Stefan Buzas, which bas resulted in s high level of presentation compatible with the glories of have anneared in London. cathedral architecture. The concerts all on Sundays

spurt in the 1970s, Norwich (1973), Oxford, Chichester, York, Ripoo (all 1976), Durham (1979) and, this year, Canterbury. Plans for Peterborough are already far advanced as are those for a major one for the diocese of London in St. Paul's.

The object of a treasury is a very simple one, principally to place on display the hidden and unused plate of the cathedral and churches of the diocese. In size they vary tremendously. The largest must be York, which stretches lo the form of a panoramic history of the cathedral and diocese, beneath the catbedral, and in this way stands somewhat apart from the others. One of the most modest must

he Norwich, which floats on a mezzanine above an aisle hearing two handsome cases of plate. Some charge, others depend on voluntary contributions, but in either case 10p seems to be the norm per head at least. In every instance they have been found to be financially self-supporting considering whether it and the proceeds are disposed might not be possible, by of by the Dean and Chapter to the foundation of diocesan causes as varied as Christian Ald or the maintenance of the fahric. Most open at Easter and close in October and most, too. day much of the plate try to vary the exhibition from which ot present remains year to year. Increasingly there is a tendency to widen the scope of our ancient cathedrals of exhibits to include items as could find space for one varied as vestments, mediaeval without grest difficulty, carved fragments, and stained

A year ago I bad the privilege of opening that at Durbam. Up until then its treasures bad been very inadequately shown in the Monk's Dormitory, a dreary clutter in the true Victorian museum sense. The average visitor would have been left totally oblivious of treasures of truly laternational importance: the carved coffin lid of St. Cuthbert the unique Angla-Samon embroidered stole and pectors cross; or the precious survivels from its Laudian heyday, music books and a cope reflecting the

only presents these precious items to advantage but ensures that modern standards in respect of maouscript and texlile conservation are fully met.

At Hereford Stefan Buzas bas skilfully designed a series of monumental showcases between tbe aisle arches. thus preserving the rhythm of the crypt chapel with its altar at the east end. Permanent pride of place will go to the early 13th century Limoges enamel reliquary depiction scenes from the life of St. Thomas a Becket. an object worthy of any of our national collections. The remainder will he given over to a changing exhibition drawn from the many hidden treasures of the Hereford parishes.

One final word. A cathedral treasury should not be a dead thing, which in many ways its encasement instead of use of things past seems to imply. The Church of England since the war bas been so obsessed with breast-beating over its eartbly possessions that to a apologetic, mean or pasliche.

For most of this century the struggled to come to terms with endless possibilities are now open for a renaissance. treasuries should play a vital part in exhibiting from time to time what is new and thus contribute to the re-establishsnlendour of the Caroline litter ment of the role of the visual gical revival. These are now arts in religion.

Contemporary Music Network concerts at the Round House

March 1981 the Round House, London, NW1, will present concerts by all the groups touring next season with the Arts Councit's Contemporary Music Network. Ten of these will be the opening concerts of the tours.

Performances by the 12 groups will make up a subscription series, the first such series of contemporary music to be promoted by the Round House. This will be the first season, since the Network started in 1972, that all the groups will possibility of carrying out the apart as the discussions con-works in a single programme. tinued. It could have been lost. In 1968 Winchester followed starting at 7.30 pm. begin on

During the period October 1980- October 5 with Turning Point. with Neil Ardley and Allan Huldsworth. The final concert, of Jananese music, past and present, will be on March 15. educational role of the Contemporery Music Network each concert will he preceded by a workshop, lecture or demonstration at the Round House. arranged by the School of Adult and Social Studies, Goldsmiths' College.

Further informatioo from Thelma Holt. Director, Round House, Chalk Farm Road, London NW1. 01-267 2541; or William Randles, Music Departe ment. Arts Council.

CRICKET BY TREVOR BAILEY

meaning there was a single for

that they have reached the end

of an era and will need to re-

build when they come to Eng-

land next summer on a full

After the sustained speed

Salzburg Festival—2

Mozart operas

is more assiduously cultivated in Salzburg now than be ever was when alive. No one need sneer about "bad conscience" —we may rather be grateful for the devoted care that the devoted care that the bibulous "Vivet Baccbus" duet in Salzburg now than be added to the bibulous "Vivet Baccbus" duet in Salzburg now than be added to the bibulous "Vivet Baccbus" duet in Salzburg now than be added to the bibulous "Vivet Baccbus" duet in Salzburg now than be ever Belmonte and Pedrillo successions and enter the palace, was inept and unconvincing; there was no infectious mirrh in the bibulous "Vivet Baccbus" duet the devoted care that the no infectious mirm in the devoted care that the modern Festival has lavisbed bibulous "Vivet Baccbus" duetting of Pedrillo and Osmin. maintaining a standard by Proper melodramatic tension which perpetraturs of shoddy or was quite absent from the insensitive productions can be denouement, where the part of judged. Not every Festival oire. I did not see the revival of Ponnelle's Figoro, which was widely reported 10 have good off. Fortunately the 1978 Zauberflöte — also by Ponnelle, and appropriational described as and appreciatively described on this page by Ronald Crichton when it first appeared — was still in stock.

Perhapa Sanjust was daunted hy the challenge of following Glorgio Strehler's famous Salzburg Entführung, or perbaps be simply lacked theatrical ideas. The distinction of Strehler's version, admitted even by those of us who thought it came near to a simplifying prettiness, lay in its strict stylish consistency. Strehler solved the "problem" of Entführung, which he took to be its juxtaposition of lively, natural action with archaically formal arias. by freezing the action into silhouette for each solo number—like a stop-frame with musical commentary. Sanjust contented hlmaelf with exercising bis designer's mêtier enthusiastically in the settings, which display just enough fresh tonches to lift them above ennventional exotic postcards (his familiar delight in peeling walls is evident throughout the harem), and—so I guess—honed that his nerformers would think of suitable things to do in them. Nobady did, though presum-

shlv Sanjust himself was responsible for the briefly exciting escape over rooftops on

The musical dimension was

more rewarding, though uneven, and in the case of Peter Schreier's Belmonte virtually independent of the opera: Schreier delivered his arias with studied refinement, and made only the studied refinement. made only token contact with his fellow performers. He or bis conductor Lorin Mazzel, or both of them, chose to take "O wie Angstlich" ao slowly as to nullify the anxious-hearthest effect of which Mozart was so proud. Pedrillo was Norbert Orth, wbo offered an unusually truculent "Frisch zum Kampfe" to some effect, but also a grace-less Romanze which Maazel cbose to provide with perhaps tbe loudest mock-mandolin accompaniment ever heard. Maazel's work was puzzling: a brilliantly vivacious overture, a fine, bristling Act I finale, a "Vaudeville" at the end which was a charming benediction— but also an Act 2 quartet in discontinuous sectiona (the most sustained dramatic music of the opera!), and the sinfonia con-certante of "Martern aller Arten" made into a breakneck

Perhaps Ileana Cotrubas, the Constanze, finds "Martern" best manageable at that implausible speed; she invested it with defiant ardour and cleao scales. though no semblance of a real trill—a grammatical failing here. Her plangent "Traurig keit" followed an "Ach, ich the revolving stage. The comic-liebte" that was uncomfortably dramatic numbers of touch-and-go; she has not yet Entführung that cry out for made Constanze's idiom her

As everyone knows, Mozart inventive business were left own (and she puts a tediously more assiduously cultivated flat. The Act 1 finale, where lachrymose face on the lady). In this company. Carol Malone's naive, eager Blonde seemed over-parted. Nature obviously inteoded Martti Talvela for the under-directed and his lowest notes were mostly promissory.

This tame Entführung will be easy to forget. The Ponnelle Zauberflöte continues to prove indged. Not every Festival pyear is a vintage one, however:

Trank Hoffmann's tormented its staying-power, astutely year is a vintage one, however:

Pasba had been as rudely cut designed as it is to light up the that he was impotent to help, cavernous Felsenreitschule (the and Osmin's final exit was old "rocky riding school," extraordinarly limp.

The muslcal dimension was saving-power, astutely designed as it is to light up the cavernous Felsenreitschule (the and Osmin's final exit was old "rocky riding school," carved, as they say, out of the living rock of the Mönchsbergl. Some of its original cast remain. Presumably the Three Boys from the sterling Bad Tolz choir are of a new generation. It is a particularly happy feature of Ponoeile's vision that they are not demure cherubs, but volatile sub-prefects who race about and give miachievous prods. For all her taste and polished technique Lucia Popp, the oew Pamina, is rather forbiddingly assured and mature: what bas this self-sufficient Pamina to fear or to learo? She is a tougher proposition thao Zdislawa Donat's cautious Queen of the Night. Talvela begins to sound bored with the part of Sarastro, impatient to get on with succes-aive lines of a verse before the preceding ones bave had their full measure.
The sudden illness of the

announced Papageno brought us Walter Berry's ripe incarnation inatesd, and in bis place José van Dam asa powerfully per-suasive Speaker. I should bave admired James Levine's conducting (just templ, adroitly balanced sonorities | still more bad I not beard Haitink's Zouberflöte, richer in unobtrusive lyrical anbtleties, just before leaving London-unfair, because preparing the score to be beard in the gigantic Felsenreitschule is a task of a differnt order from preparing it for Glyndebourne. In its own brosder vein, the Salzburg Zauberflöte remains e vintage

DAVID MURRAY

Albert Hall/Radio 3

Tippett's new Concerto

No special prescience is most difficult of mediums, it there is a sudden break, and a needed to bail the new Conneeds saying that) Tippett has pungent Interlude for percuscerto for violin, viola, cello and out the score with consion (in which the trumpets orchestra by Sir Michael Tippett orchestra by Sir Michael Tippett cycles it has led to a killing off of the visual imagination put back into it by the Oxford Movement. Few periods have produced so little in the way of church furnishings and what little bas been produced is often work is put together only summate skill; the soloists, blow away their assertive together sud apart, are always triplets in little roulades) leads audible. The opening section introduces a Mozartian wealth of material; yearning, expressive, double-stopping for the viola; bright, cascading passage inventiveness with which the music is put together only summate skill; the soloists, blow away their assertive together sud apart, are always triplets in little roulades) leads together sud apart, are always triplets in little roulades) leads together sud apart, are always triplets in little roulades) leads together sud apart, are always triplets in little roulades) leads together sud apart, are always triplets in little roulades) leads together sud apart, are always triplets in little roulades) leads together sud apart, are always triplets in little roulades) leads together sud apart, are always triplets in little roulades) leads together sud apart, are always triplets in little roulades) leads together sud apart, are always triplets in little roulades) leads together sud apart, are always triplets in little roulades) leads together sud apart, are always triplets in little roulades) leads audible. The opening section introduces a Mozartian wealth of material; yearning, expressive, double-stopping for the work for the viola; bright, cascading passage an intense line for solo 'cello are the produced is often together only are always together sud apart, are always together sud apart, are always together sud apart, are always triplets in little roulades) leads together sud apart, are always there always together sud apart, are music grows with further study. Tippett's Concerto is an outpouring Church bas been disorientated of rhapsodic contentment, sus-by the modernist movement tained without a suspicion of which has destroyed its vocabu- sentimentality or self-indullary of images as it has gence: Its mood would bave to he described as unfashionable, abstractionism. With the return, had it not so easily and successof the figurative in the arts fully communicated itself on Friday night. I have not slways been con-

vinced by the strenuous seriousness of Tippett's recent instrumental music. Both the Fourth Symphony and the Fourth Quartet left questions unresolved at their close: the violent arguments of the former dissolving into the uneasy pulsing of a human breath: the obsession of the latter with Beethoven's Grosse Fuge giving way to a remote, uncertain lyricism. Nnw we can see the world that both were pointing towards: we have Tippett's own declaration that a passage near the end of the Ouartet provided the direct inspiration for the conversation of the soloists in the new Concerto: the end of the Symphony, too, now seems to lift the veil on a new vision of sensual peace. The formal preoccupstions of

the Concerto are similar to those of the Symphony, but the expressive content is radically lines with extra reasonance and different. The Concerto is in colour. The passion of the one movement: three sections central melody grows, and lioked by two interludes. Needless to say (or rather, in this violins cluster round it; then

Then follow blocks of material typical of Tippett; based in turn on acerbic brass writing 1the only reminder of the fast fading world of the Symphony); a crisp and then drooping interval of a major ninth, played by violin and cello soloists with glissando (" singing, breathe "): and quiet rbythmic ostinato, which the three soloists interrupt with a jazzy phrase. All the al is rearranged and developed, with the three Initial solo statements interspersed in

The exquisite first Interlude is no more than a pianissimo flutter of marimba, barp and nine solo violina, and a delicate clinking of alto flute, clarinet, celeste and glockenapiel. Then the central section of the work -10 minutes nut of its balfmain emotional weight—intro-duces an audaciously simple tune for the three soloists in unison, with a modal Bali oriental tinge (inspired, it is said, by the muaic of Bali). Twice it is interrupted by ruminative colloquies: first in cello with bass oboe: then for violin with alto flute. As throughout the work, other instruments tinge the solo

ls s tiny reference to the lyrical world of The Midsumer Marriage: A cheerful little Beethovenian rhythmic tag pushes the music along. Then it disintegrates, and hypootic cauple of minotes it rebuilds itself over a new rbytbmic pattern. Mucb compressed and foresbortened, the open sections' themes are recalled: the sololsts sing one last ecstatic outburst, and the dessicated notes. On Friday, the Concerto was

played with supreme confidence and understanding by the three soloists: Ralph Kirshhaum found the depth and power of the cello's lines. Lobuki Imai was an astonishingly powerful viola sololst, and György Pauk an eloquent violinist—only in his duet with the alto flute did the precision of the performance slip. Orchestral soloists were first-rate; Sir Colin Davis waa subdued but most efficient. This is a work which it is easy to love without reservations: indeed, that much misused adjective "lovely" seems precisely appropriate to describe its allurements. After a period of fruitful experimentation, Tippett seems in this piece to have found again a natural, wholly The work la attractive, original, coherent: we must bear it

NICHOLAS KENYON

TENNIS BY JOHN BARRETT

Doubts about Borg's grand slam fitness

grand slam events, opens today at the U.S. tennis centire in Flushing Meadow amid specu-lation about the fitness of the top men's seed, Bjorn Borg.

The Swede, who won the first two legs of the grand slam with a record 5th title both in Paris Wimbledon earlier this year, had to withdraw from the final of the Canadian champion ships against the young Czech, Ivan Lendl, mine days ago. He bad a knee injury and blisters on his racket hand.

That was his first tournament appearance since Wimbledon because of his marriage Mariana Simionescu, and was intended as a warm up for his U.S. Open challenge in New York—the only major title that has eluded him.

Fierce serve

Curioualy, it was a badly hlistered hand that contributed to his defeat at the hands of Jimmy Connors in the 1978 final —the first year at the new asphalt surface. Although Borg's compete in two different convincing Masters victory last environments. always seemed to pursue him in mercial sense to open the gates

face the fierce serve of John stiles—only 40,000 short of Sadri, who upset so many gond Wimbledon's average attend-Sadri, who upset so many gond playera at the start of the season. In the quarter-finals he can expect another meeting with Roscoe Tanner if the Tennessee left-bandar can beat Miami's Eddie Dibbs.

Essential

Significantly it was Tanner who put out Borg last year under lights at the same stage. Once again, there will be evening sessions under floodlights for the first ten days and Borg, who claims he cannot sight the ball properly in those condi-tions, will doubtless bope his obligatory night match will be against a lesser server.

While the USTA claims that might play is essential both to Sunday of the ATP champion-pay of the loans still nutstand-ships in Cincinnati, or Lendl. ing against the cost of constructing the centre and to satisfy the normal expectations of New York sports fens, many players feel it is unfair to be asked to

January broke the jinx that Certainly it makes good com-

THE U.S. OPEN championships. New York the draw has been twice in a day. Last year the the third of the four traditional unkind to him again. 23 sessions brought 305,311 pay-In round two he will bave to lng customers through tha turnance for the 12 days of play. If he survives to the semi-

final, Borg will face elther last year's finalist, Vitas Gerulaitis, the American who has never beaten him in tournament plsy, or tha Argentine left-hander Guillermo Vilas, now fully restored after the removal of his appendix in June.

In the lower half the number two seed and defending champion; John McEnroe, bas a much easier task on paper. Laat week's first round loss to John Austin, Tracey's brother, is not significant in assessing his chances here where the giant Victor Amaya will probably be his toughest hurdle before a Harold Solnmon, the winner on

Line up

In the semi-final McEnroe is acceded to face his old rival Connors which would be a repeat of last year's match won comfortably by McEnroe.

If the main seeds all get

through, the quarter final line up will be Borg (1), v Dibbs (8); Vilas (4) v Gerulaitis (5); Gene Mayer (U.S. 6) v Connors (3); Solomon (7) v McEnroe

Prodigy

defending women's champion, Tracy Austin, ia strongly fancied to win again on ber favourite surface—des plte the jolting loss sbe auffered last week in New Jersey at the handa of ber successor as infant prodigy of the U.S. game, 14-year-old Andrea Jeeger. Miss Jaeger herself was beaten in the final of that tournament by the 18-year Czech Hana Mandlikova who in the course of her successful run had beaten Dianne Fromholtz of Australia. prospective quarter-final against and her girlhood idnl and former Czech Number 1. Martina Navratilova.

> Both the third and fourth seeds. Chris Evert-Llnyd and Evnnne Cawley, have relatively easy tasks in the quarter-finals where the matches forecast by the seeding committee are Austin (1) v. Fromboltz 16); Lloyd 13) v. Greer Stevens (SA. 7); Jaeger (8) v. Cawley (4): Turnbull (5) v. Navratilova (2).

ENGLAND, as expected, won magnificent bowler, is comparaday internationals and gains his the two one-day Prudential intively mild, and both Gooch and first full cap.

England look set for Centenary victory

teroationals without much trouble. The Australians bad Boycott obviously enjoyed sys-tematically taking it apart. not really come to terms with Thomson is still seeking a the requirements of limited overs cricket. Their captain, Greg Chappell, plainly does not enjoy this form of the game, does not bebeve that it pays to bat first on an easy-pace wicket, and finally some of his field placings were naive. Geoff Boycott could bardly have believed his eyes when, on 18, and just settling down to tha England batsmen, while produce one of his apectacular innings, he aaw six fieldsmen dotted around the boundary,

the asking whenever be wanted As a result, I expect England to win the Centenary Test at Lord's, though Greg Chappell, Although the requirements for Test and limited nvers if he has recovered from his cricket are different in many injury, is capsble of scoring a ways, there could be no discentury against a stronger guising certain fundamental attack than our own, and Wood, weaknesses in the present Aus-Hugbes, Yallop and the very tralian party. These were also promising Border can all make very apparent in their first class match against Notts, suggesting

many catches.

ralian team spilling quite so

With Rose unfit our selectors have recalled the talented Gower, whn bas not produced the runs for Leicestershire which his ability warrants, but he certainly ought in go to the swerve. and menace of the West Indies, Caribbean this winter. They

From the England angle the

twittering muted and pizzicato

most satisfactory feature this summer bas been the advance smooth run-up which is essen- made by several good county tial if he is ever to groove his batsmen, who one bopes will slinger's body action. Without develop into true Test that, be can never achieve the cricketers. However, it should requires, while Pascoe is a the top 10 places in the straightforward quickie. In class averages are occupied by overseas cricketers. The only of their spinners, Bright or English players under 25 in the Mallett, unduly worrying any of first 25 are Botham, R. Butcher, tha England batsmen, while and ironically two discards, their fielding is sub-standard Larkins and Tavare; while and I cannot recall any Aust- Willey, with an average of 23 and his wickets costing 37 apiece, must, in some respects. be lucky to hold his place, especially as his Northants colleague, the exciting Willing. has heen scoring heavily and spins his off-breaks rather

> The most worrying feature of the England XI is their pace attack. With Dilley ill and Willis out of form, we rely on three fast-medium howlers, Old, Hendrick and Jackman, who are all on the wrong side of 30, plus Botham, who seems to have lost much of his speed and

This could still prove suffithough Lillee clearly remsins a batted impressively in both one- provided the Lord'a wicket is oational quality.

baston, but it does not augur too well for the West Indies tour this winter, where the bali does not seam as much as over

This summer, Botham has been bampered by injury and lack of bowling, but what has happened to his late swerve? This ability bas been the key to his great success as an attacking bowler and largely responsible for the 150 Test wickets he has taken so quickly. Without his deceptive swing, which turoed a balf-volley into potential wicket-taker, be comes just another fastmedium seamer.

It is to be boped that be rediscovers the art of swerve quickly, yet it is not always that simple. I remember Massie, who devastated England with his swing and then abruptly lost it all, so that he faded not only from the international scene, but from firstclass cricket. Although this could not

happen to Ian hecauae he is also an outstanding stroke maker in his own right, England certainly cannot afford to lose their most penetrative bowler, especially when there is such an acute shortage of the Australian pace attack, bave also picked Athey. Who cient against the Australians, new ball howlers of inter-

FINANCIAL TIMES

BRACKEN HOUSE, CANNON STREET, LONDON EC4P 4BY

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Tuesday August 26 1980

The West's priorities

plagued by economic uncertainty and widespread agencies. poverty. This second issue is now the subject of a special session of the UN General Assembly which is beginning this week in New York. The format is unpromising. All past purches a special special content of pregnitations, between rounds of negotiations between the industrialised North and developing South have ended in frustration and mutual suspicion with the main result a small and still untested fund to stabilise commodity prices.

Now too energy bas bean dissi-

pated on the session's agenda instead of tackling the vital

issnes at stake. Regulation

the need for concern and urgency in tackling the issues of international development. The report bas been criticised, and rightly so, for scattering its fire too wide; for often allowing passion to displace analysis; for putting too much stress on the external factors slowing development in the Third World and not enough on domestic factors; for questionable assumptions about, for instance, the ability of governments or international institutions to regulate the world economy; and for setting a number of major but unconnected issues such as threats to the environment within the ambit of the

North-South dialogue. There has been debate over criticisms, the report remains of considerable value. It provides a powerful reminder that polified from which both North and South will gain. And, while stressing the responsibility of the rich to the poor, it also high-lights the common interests hinding North and South.

1980s produced by the World Bank last week underline the

Good news on

investment

now been undermined by new

official figures. These show that capital investment over the last

couple of years bas been about

(inflation adjusted) terms than

Britain, it now appears, has

been experiencing something of

a capital investment boom.

Spending by the manufacturing, distributive and service sectors

rose by 31 per cent in real terms

between 1976 and 1979 to more than 15 per cent above the

previous peak in 1974. Even in

manufacturing, fixed investment

rose by 221 per cent between

use of leasing is taken into

At one level, these figures

provide a welcome antidote to the fashionable gloom about

industry's prospects. They also

confirm the growing view among economists that initial

Government estimates of invest-

ment and of total activity con-

sistently underestimate the strength of Britain's perform-ance. This is not a statistical

quibble since attitudes and

expectations—and what remains

of the animal spirits of business-

men-are influenced by percep-

tions of what is happening to

in some respects surprising in view of the historically low level

of real profits in the last few

years. There is certainly scant

evidence of any widespread

The strength of investment is

the economy as a whole.

plans to expand capacity.

previously estimated.

per cent higher in real

AS WESTERN leaders grapple occupied with internal prob-with the problems of recession, lems, Western countries will unemployment and inflation, increase protectionism or react they bave been largely ignoring like Britain in cutting aid or the connected but bigger challike the U.S. Congress in long lenge of shaping a world less resisting fresb appropriations plagued by economic un- for international development

The overwhelming public response to appeals to counter famines such as those in Kampuchea shows that in this area politicians often lag hebind public opinion. But where a lead is particularly necessary is in stressing the other reasons for raising horizons from the national to the international. Helping agriculture in developing countries is of mounting importance in a world with diminishing reserves of agricultural land.

Economic necessary for political stability. Six months have passed since And there is the ever-increasing the report of the Brandt Cominterdependence of a world mission focused attention on bound by tightening links of trade, investment and finance. One-fifth of industrialised countries' merchandise exports now go to the developing countries. For these countries to service their bank debts of over \$250hn it is crucial for them to he able sell in the markets of the

There is much the developing countries can do within their own borders. There is also the need for the oil producing countries to cease neglecting the problems oil price increases cause in the Third. World. But Western leaders can only stress such points if, as Chancellor Schmidt is beginning to do, they give priority to the problems of the international economy.

It is probably too late for the report's neo-Keynesian view much to be expected from the national taxation of items such whether meetings of this kind, as transfers of weapons. But covering the whole panoply of even if one endorses all the world development issues, can achieve worthwhile results. Where there are specific problems on, for example, financial lies and measures can be identi- or energy matters which need an existing institutions like the World Bank and the International Monetary Fund—the World Bank proposal for a separate third world energy development hody is a move in the right direction.—but It is at the level of the right direction.—but It is at the level of the manufacture world world energy to the worldwatch places like Kampuchea and Failing that, be said, a separate food reserve should be created. This fact has also independent research organisation underlined the need for countries to hold grain stocks of the countries to hold grain stocks of the food in the first place or foo The gloomy forecasts for the is at the level of individual 980s produced by the World governments that the mosts cank last week underline the crucial decisions affecting trade importance of recycling the and economic growth are taken. capital surpluses of OPEC In the developed countries there

become much more pessimistic.

net refurns on proposed spend-

ing are cited as much more

financial constraints. Inability

There is, however, evidence

that some companies are press-

deed, the main effort at present

seems to be to cut excessive

levels of stocks (with mixed

success to date), to hed sur-

plus labour and to close mar-

ginal plants. The promise is the

eternal one that after the shake-

out there will be a new and leaner manufacturing industry

ready and eager to win new

markets. So far this is merely

higher unemployment is more

apparent. Yet the investment

surge of the late 1970s cannot be

important Influences

scarcely mentioned

Significantly,

countries and of ensuring are strong economic and adequate flows of funds to the developing world. But the developing world danger remains that, pre-

Bad weather unsettles world grain markets

REAK WEATHER in key agricultural areas of the CHRIS SHERWELL considers the effect of world during the past few months has renewed concern about the underlying fragility of global food supplies—and made grain exchanges an unheat, cold, drought and flood which have variously struck North America and Europe this summer. Below he looks at the problem settled "weather market." of feeding the hungry in Third World Following a heat-wave and drought in parts of North America—and the ravages of countries

wet summer in much of Europe, 30 per cent from mid-June to planted over a greater acreage another year of the same in a few weeks ago when they also softened (from 630 cents per 60 lh busbel for September delivery to 820 cents, and easing the grain-growing continents another year of the same in 1981, it is being said, could be ant grain-growing continents more recently to about 750

has been enough to set the mar- cents). kets moving. Canada, the U.S. and Western Europe between them produce nearly 75 per cent One London dealer says all commission houses were telling their clients to buy or sell simply because of the weather, and there was some beavy speculation. "We are still produces 72 per cent (71m tons bullish on grains, and especially this year) of the world's coarse corn," he says. "Although the overall picture is not a lot worse than last year, and there is a large carry-over, we are pessi-mistic about yields because of

the weather. The statistics underline these fears. Latest figures from the U.S. Department of Agriculture (USDA) show that coarse grain output in the U.S. - that is, grains used more for livestock than direct buman consumption -will be well down on last year. from 234m tons to 197m tons. Coro projections bave been drastically reduced, as bave soya estimates. Sorgbum was

described by one official this week as a "complete disaster." Wheat has been less bard hit.

than last year. As a result price movements bave been less extreme and concern about wheat has been relatively muted. The overall picture for the

tween supply and demand. There will he a net addition to wheat stocks, with production slightly in excess of consumption. In coarse grains consump-tion will again outstrip production, and by a larger margin, leading to a net fall in stocks. Total grain stocks should remain at approximately 60 days' worth, above the notional 45 days regarded by some—notably the Food and Agricultural Organisation—as the absolute minimum.
In addition, the third ingredient in world grain supplies
— rice — is unlikely to be an important factor this year. Projected output of 394m tons, mostly in Asla, will be up on iast year's figure, and all but the smallest fraction will be consumed locally. Very little is traded - indeed, rice only becomes important in world

wheat as a substitute.

is hecoming a more serious pur-chaser on the markets, and will buy 11.5m tons this year after 8.8m last year.

But little comfort should be drawn from this year's apparently optimistic grain stock picture. Images of mass starva-tion and malnutrition in Kampuchea, East Africa and the Sahel region continue to highlight the weaknesses of the world's food supply network. For all the complex causes of these disasters — and they are political as well as agricultural or climatic — relief for millions of people has depended in the end on food being available on year shows a broad balance be-

Also the all-important Soviet crop remains unpredictable. Together with the prospect of a continuing Western grain embargo on the USSR because of Moscow's invasion of Afghanistan, this powerful inof dealers' calculations.

This year the Soviet Union, like North America and Europe, bas been suffering from the vagaries of the weather. Hot, dry weather in southwestern areas of European Russia and southern areas of the New Lands in July, and flooding in the western Ukraine, Byelorussia and the Baltic republics, significantly reduced the country's grain prospects.

embargo.

But the U.S. Dapartment of becomes important in world Agriculture puts the likely crop terms when it fails and product at 210m tons, well np on last ing countries need to import year's poor 180m tons, if short of the level produced in 1973. wheat has been less that the U.S. Changing Asian diets. in This means that the Soviet which supplies 47 per cent of which more bread and meat are union is likely to be looking world exports, were largely unaffected by the dronght, while helping to boost global wheat of wheat and around 14.5m tons spring wheat, although certain demand, a significant trend for of coarse grains, according to to suffer lower yields, was the future. China, in particular, USDA.

the U.S. presidential election in November and the inauguration back on meat production to next January. For President cope. Meat shortages and high Carter it would also involve a prices have provoked strikes and politically difficult U-turn, unrest in the USSR this year, although it is recognised that and the present discontent in the U.S., and particularly the Poland has been a stark American farmer, has probably reminder of how political the paid the biggest cost of the subject of meat has become.

embargo.

If the grain embargo is mainThere is now a growing feeling that if the USSR does come market could be greater. But the Soviet Union would still be into the market in a big way, able to secure up to 8m tons of grain from the U.S. in the fifth year of a five-year U.S.-USSR the U.S. should be there to meet the demand. The U.S., after all, is a willing exporter these days for balance-of-pay-

grain agreement.
Additional supplies could no ments reasons. But as present doubt be beught under the figures suggest that Russian doubt be beught under the counter. The USSR is thought

Two Texan cowboys ride past a dead steer last month after a ten-month drought. Some signs bave emerged recognised to have a problem recently that the grain embargo with its coarse grains and one may be lifted, but this, if it that has peculiar significance happens would only be after because Moscow and its satel-

purchases will not be on a grand counter. The USSR is thought scale this year, grain dealers to bave made up all but about are expecting little impact on 45m tons of the 17m tons of

prices if the embargo is lifted. grain which would have come The USSR is nevertheless from the U.S. this year

The hungry nations press for fresh solutions to shortages

of the world economy and its special session in New York. In global food security are the proposals for automatic inter- any case it is questionable actual size of world food actual size of world food enormously—in other words stocks, the efficiency of distri-that stocks alone are not a hution networks and the rellable indicator of world food capacity of existing agricultural lands to meet the needs of growing populations. On these

Hurricane Allen-and a cold,

(some 64m tons this year) of the

world's wheat exports (almost 87m tons), while the U.S. alone

grain exports (98.6m tons).

In this enormous world market where grain cargoes can change ownership in a minute,

the balance of supply and

demand is inevitably precarious. Potential sbortfalls can bave

a disproportionate market im-

pact, despite carry-overs from

the previous year. Unanticipated

purchases of a few million tons

by an importing country whose crop has failed can quickly lead

This summer maize (corn)

prices, which had declined steadily until mid-June, started

to move up. They rose some 20 per cent in a few weeks

(from 290 cents per 50 lb busbel for December delivery

to more than 350 cents) before easing slightly with the arrival

of rains following the hurricane.

to a change of sentiment.

large grain stockpiles and cropland reserves In the U.S. has Third World countries have been eroded over the past two neither. Nor in many cases can decades, with world grain stocks dwindling from 112 days' world grain consumption in the early 1980s to less than 40 days'

Certainly inefficiency of distribution has been an important According to the Worldwatch places like Kampuchea and Institute in Washington, an East Africa. This fact has a linear than the control of the price. Many of the poorest encourage these countries to persistent inflation and con-Third World countries have produce their own food. This is tinued recession as factors conthey store grain without losing it to the weather, pests or

ment is misleading because it example, takes place in Lordon takes insufficient account of the fact that growing populations are eating more wheat as they related to claim far more lives than military conflict." Certainly the vexed tries, the problems are more complicated. Many started along looks bound to become a more lives than military conflict. Certainly the vexed problem of world food security complicated. Many started along looks bound to become a more lives than military conflict. Certainly the vexed problem of world food security looks bound to become a more lives than military conflict. Certainly the vexed problem of world food security looks bound to become a more lives than military conflict. Certainly the vexed problem of world food security looks bound to become a more lives than military conflict. Certainly the vexed problem of world food security looks bound to become a more lives than military conflict. Certainly the vexed problem of world food security looks bound to become a more lives than military conflict. Certainly the vexed problem of world food security looks bound to become a more lives than military conflict.

trade in grains has expanded expensive stocks programme at The urgency is nevertheless

growing. In July the World Food Council's executive direc-tor stressed the need for a new intercational wheat agreement as the centreplece of a strategy to improve world food security. Failing that, be said, a separate developed countries pay for damaging and impossibly costly

not as simple as it sounds. In tributing to political instability countries like the U.S., how the world over. In the view of much food is produced is essenthe Worldwatch Institute, "uncommon graft.

tially a political issue, a ques- less countries can give agricultion to be resolved around the ture the financial and scientific tially a political issue, a quesconsumption in 1973 hefore a system of nationally held negotiating table with the support it needs, hunger-being partially rebuilt more stocks are continuing at a powerful farming lobby. Far-induced death rates will prob-recently.

International relational results in the support it needs, hunger-being partially rebuilt more stocks are continuing at a powerful farming lobby. Far-induced death rates will prob-lethargic pace. A meeting of a mers are paid to withhold land ably continue to claim far

couraged to produce cash crops rather than food.

Desert areas are growing because of man's activities at their fringes. Marginal lands come under cultivation, animals over-graze on reduced areas, water wells encourage settlements, and dusthowls are created. Even where there are sophisticated irrigation systems, the consequences of salting and silting can be enormonsly to remedy. .

Food shortages and rising food prices will thus join less countries can give agricul-

THE WORLD GRAIN BALANCE *

PRODUCTION (m tons) CONSUMPTION (m tons) 1980-81 68.0 22.6

TOTAL	720.9 -	727.8	TOTAL	738.0 733.3
Other	197.3	188.7	<u> </u>	
USSR†	94.0	80.0		
U.S.A.	197.1	234.5		
Thailand	3.6	3.5		
South Africa	10.2	11.3		·
West Europe	93.1	90.6		
Canada East, Europe	61.6	18.6 63.5	Other	399.0 -396.9
Brazil	19.5	20.1	USSR†	107.6 100.6
Australia	6:6	6.1	U.S.A.	748,9- 156.2
Argentine	17:1	10.9	· China	80.5 79.5
COARSE GRA	iNS	/	ve francisco de la	7. 19. julius —-
TOTAL	443.2	419.4	TOTAL	437.9 - 439.2
Other	111.8	111.2		
USSR†	103.0	90.7		
U.S.A.	63.3	58.3		\overline{z}_{i}
India	37.0	35.0		<u></u>
West Europe	60.3	55.5	- Odiel.	2-10-1 - 2314

As on August 13, 1980. U.S. data for consumption of wheat, barley, oats and two adjusted to reflect June-May marketing year. † UASR production and consumption of wheat and coarse grains, on bunker weight basis. Source: U.S. Department of Agriculture

STOCKS 92.3 COARSE GRAIN

MEN AND MATTERS

Planner plans ONE OF the most persistent This has encouraged labour myths in the endless dehate saving investment. Reports from about "wbat's wrong with a wide range of individual combritain" bas been that the level panies support this interpretastrategic return

Britain" bas been that the level panies support this interpretaof capital investment is very tion, and industrial opinion
low. This view, enshrined in the "I went too fat, too fast," says the none-too-modest Michael Allen, former vice-president and arch-planner of TUC inspired minority report ary motive for capital expendi-of the Wilson Committee, has ture is to increase efficiency General Electric, attampting to rather than to expand capacity.
Capital spending has beld up
reasonably well so far this year explain his decision last year to climb down from the corporate heights and establish his own —at only 1 per cent below the average 1979 level. To a large business management consul-tancy in Stamford, New Jersey. Now, with his former em-ployer and a clutch of pedigree U.S. industry names on his list extent this reflects the momentum of past investment decisions taken when the outof clients, the 41-year-old Briton is hawking his notions look for demand was brighter. A sharper cyclical drop is likely over the next 18 months. and reputation around the old The Confederation of British country in the bope that his Industry, which has in the past not been as gloomy as some first overseas branch, in London, not been as gloomy as some will get away to a brisk start about investment, bas recently from its official opening next month.

Its recent trends survey pointed to a drop of at least 5 per cent Already boasting a bandful of UK bookings—two companies have retained bim specifically in manufacturing investment rose by 221 per cent between this year, with a fall of nerer 1976 and 1979 after the growing 10 per cent in 1981. to belp them penetrate the U.S. market with food and consumer electricals—he bases his sales pitch on the latest huzz words uncertainty in industrial argot: "strategic planning." Planners corporate and financial, be claims. have about demand and inadequate no place in the forefront of British management. "Strategy" is the bon mot of the eightlesto raise external finance is a time when growth is static and when the only husinesses able to exand are those which plan aggressively to increase their market shares. Too many, he says, are retrenching, "battening ahead, with modernisation ing down the hatches and conplans despite the recession. Insuming cash."

Complaining of "half-bearted" attempts by British companies to make progress in the U.S., he cites EMI's unhappy experiences with the body scanner (he, of course, worked for GE in the thick of it), and he is personally afflicted by what he terms the "criminal negligence" which has left bis neighbourhood with only one accredited agent to

pect, and the immediate cost of look after his Jaguar. Travel weary, dyspeptic and hoarse after a rapid round of lunches, dinners and interviews ignored. It may mean that with some 40 senior British British manufacturing industry executives, be tells me the the cost of purchasing equip- is in hetter shape than is often | image of management consul-



"Comrade Gierek should take care . . . any more sackings and he'll have the Politburo striking for better joh security."

nished in Britain by companies offering mainly patter and attractive packaging.

But be was comforted that

two-thirds of his contacts had asked to bear more from this pensive young man whose experience in business management extends from the top of the U.S. tree to the very roots of British industrial life. From his early days with McKinsey he recalls many tortured hours pondering the cumbersome strategies which governed the timing, length and organisation of the GPO's tea hreaks.

Backfire

Quick to learn from the jingoistic tactics of certain British companies - barring foreign vehicles from their car parks—South Africa's biggest car manufacturer has issued the months ago I was sent to inevitable riposte which will do nothing for UK exports.

Drivers delivering supplies to plant outsida Pretoria are being banded a billet doux which tells them that from the end of the year "only Sigma vehicles will previous responsibilities." tancy has been somewhat tar- be permitted to proceed beyond

all entrance gates where there other band, still hold to their are security checks." Managing director Frank Butler, with an eye to further

improving sales of his Mazda "Berec International," sniffs a and Mitsubishi trucks and senior officer, "is a paperwork Peugeot, Citroen and Mazda company." And Berec Inc? cars, explains: "We are big customers for our suppliers, and they ought to be supporting us."
With 40 delivery vehicles
calling at the factory daily, he counts on augmenting his company's 17 per cent share of the

Lorries over three tons will. however, be exempt from the ban for the time being. The concession, stresses Butler, owes nothing to generosity. Sales of Mitsubishi trucks, he tells my man of the spot, have been so high recently that there is a long delay on deliveries. But when the bottleneck clears Sigma suppliers would be well advised to trade in their BLs and other "foreign" trans-porters, and beg or borrow one with a Japanese name.

Small change There has, I hear, been some

messy rewiring work carried out in the management cir-cults of hattery-maker Berec. And while the direction has yet to shed any light on the toingsand-froings, I can report that the former managing director of Berec International and president of Berec Inc U.S., Charles Adams, is now hegin-niog a new career after his disconnection disputations earlier this year.

'Trading in anything and everything, mainly with Africa," the 54-year-old Adams is still plainly cross that bis resignation has passed with nary a mention from the group-nor any compensation. I was there for 28 years,"

collect a Queen's Award for "Earlier this year there was

the Sigma Motor Corp assembly a reorganisation, and I came off very badly. They offered to give me the same salary for taking on about a fifth of my

view that there was no need to Frank trumpet the sbufflings in their grandiosely-titled subsidiaries.
"Berec International," sniffs a

Lunch box Although I still do not believe

uses for the furnishings removed in Lloyd's of London's refurbishments (would anyone seriously use a wooden lavatory seat as a picture frame?) I am happy to report that other items of underwriting memorabilia are being put to reputable use. After less than a week in the window of the Peter Jones department store in Sloane Street, one of the old under-writers' boxes was sold at the weekend, complete with benches and brass number to hegin a new career as a six-seater bijou dining suite. Seasoned as it is with many years' blood, sweat and tears, my deodropbilous friends in the lumber business tell me it could be guaranteed wbolly gravy-proof, and, for this quality alone, was a snip at

Clean cut

For frankness above and beyond the call of duty, this week's Straight Talkers' award goes to the Belgian insurance company Prévoyance Sociale, directors declare in this year's English report: "The PS Group is constituted of six corporations . . . pursuing a common aim: to work in respect of the one and same ideal and to repel any spirit of filthy lucre."

Getting on

ን.

A "This is the age of the train" poster at Paddington has been embellished with anonymous notation "104."

Observer



A atimulus to investment may have come from the sharp rise an alluring and remote prosin the real cost of energy during the last decade. But possibly the most significant factor, particularly in the UK, has been the sbarp increase in the real cost of employing labour relative to

Financial Times Tuesday August 26 1980

FINANCIAL TIMES SURVEY

Tuesday August 26 1980

The world's aerospace industries go to next week's Farnborough international air show with full civil and military order books, confident that the long-term outlook is brighter than the current business recession in the U.S. and Western Europe suggests.

Aircraft builders ride out troubles

By Michael Donne

Aerospace Correspondent

THE EFFECT of the current world's aerospace has so far been industries minimal, and they are confident that they can ride it out because of the long-term nature of aircraft and aero-engine design, development and production programmes.

Where the recession has been felt most is in the airline industry, with revenues severely hit by slackening traffic growth even declining traffic in some cases—and soaring costs. This has slowed the placing of orders for new airliners by some air-lines, especially in the U.S. But the impact so far bas been much less severe throughout the rest of the world, and especially the many developing countries which are expanding their civil aviation infrastructures rapidly.

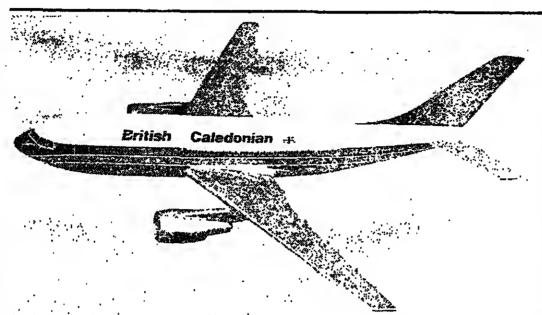
Even those airlines which

deferred - re-equipment decisions because of financial difficulties, stemming from the expected to buy sooner or latter. This is because their existing fleets are ageing and are becoming increasingly fuel-inefficient in an era of soaring fuel costs, as well as unacceptably noisy in an increasingly environmentally sensitive age.

Nevertheless, there is no doubt that the economic difficulties of many airlines in difficulties of many airlines in the Western world are acute, again especially in the U.S., where operating profits for 1970 collectively fell from the 1978 level of \$1.4bn to \$200m, the lowest annual level on record, with a further fall forecast for 1980 cast for 1980

There have been some gloomy predictions of bankruptcies or mergers in the U.S. airline industry, but so far the airlines have been able to struggle through the summer. Western Enrope, revenues have also come under considerable pressure from soaring fuel costs (British Airways is a prime example). Fuel now averages about 90 cents a U.S. gallon, with further price rises forecast over the year ahead and an eventual price of about \$2.80-\$2.90 a gallon generally expected before the end of this decade.

To add to the airlines' problems, consumerist pressures for cheaper fares have also been developing rapidly, again especially in Western Europe. The problem of equating these demands with rising costs not only of fuel but of other items such as landing fees, navigation transport industry has been charges, labour and re-equipaccustomed to in the past. ment bills is giving many air-line executives a miserable



problems are cyclical, and that by 1981-82, it is hoped, an improvement wil be seen. foresce the possibility of a flood of pent-up orders from airlines seeking to recover ground Instruction over the proceeding two years, and to secure good positions in the delivery queues that are likely to lengthen during the

mid to late 1980s.

Overall, the impression that by that time, air traffic will be growing again, aibcit at a slower rate than the air But this will still mean a sub-

stantial increase every year in the number of scheduled passengers, and the 1979 total of level hefore the end of the decade. So far only, Boeing among the

major m: nifacturers annomiced a cut-back in pro-duction, because of the effect of the recession. It is only a comparatively small reduction. from 322 jets planned for next year to 283, mainly involving Jumbo jet output, which will be reduced from seven to five a

Opposite trend

For all the other airframe and engine manufacturers, the trend is the other way, with some even expanding produc-tion to meet the heavy contracbecause of financial Most civil aircraft manufac-stemming from the turers, however, remain confi-are nevertheless dent that the current economic to go well above the 1bn-a-year generation jets. Even Boeing generation jets. Even Boeing sively from the current level pete more strongly with the

itself is pressing ahead rapidly with its new 767 semi-wideboolied jet, due to fly later next year, and its narrow-bodied 757,

due to fly-in early 1982.

McDonnell Douglas is also
now well down the road towards a formal launching decision (perhaps later this year or early in 1981) on its new Advaoced Technology Medium Raoge (ATMR) 178-seat short to-medium raoge transport, now known as the DC-XX, to com-pete with the 757 and ensure that Boeing does not get the market all its own way.

In Western Europe, the international Alrbus Industrie group places to raise output of its A-300 250-seater and A-310 200-seater Airbuses progres-

British Acrospace, Aero-spatiale of France, Deutsche Airbus of West Germany wbich io turn includes Messerschmitt-Bolkow - Blubm and VFW), CASA of Spain and Fekker of Holland. With a total of well over 400 air-craft ordered of both the existing 250-scat A-300 and the smaller 200-seat A-310 (pictured left, which is now under development), the Airbus has become a major rival to the U.S. manufacturers for the world's wide-hodied airliner markets. Further deve-Inpments of the Airbus are under study by Airbus In-

The European Airbus programme represents the big-

gest single civil aviation manufacturing venture on this side of the Atlantic,

embracing such companies as

of about three aircraft a month to ten a month by 1985, This in turn means that British Aerospace, which huilds the wings for those aircraft, must substantially raise its own

dustrie, and are expected to he

output. The UK group is scheduled to deliver 35 wing-sets for the A-300 this year. 43 wingsets for A-300s and A-310s next year, and 50 A-300 and 11 A-310 wing-sets in 1982, rising to meet the requirements of further thereafter, especially as A-310 output expands.

Airbus Industrie must also take a decision soon on new air- area of aircraft manufacture liners. It must decide whether that has experienced a setback or not to develop the improved as a result of the recession has A-300 Series 600 airliner; been the general aviation A-300 Series 600 airliner; been the general aviation and the benefits in fuel economy Whether to build a stretched sector, building light aircraft that gas-turbine aircraft can A-300 to seat up to 350 to com-

U.S. Lockheed TriStar and McDonnell Douglas DC-10; and whether to build a series of smaller 130-160 seater airliners, the "Single Aisle" or "SA" series, that would compete with the 757, the ATMR and perhaps also with the McDonnell Douglas DC-9 Super 80 which

sion of the 737 short-range jet. In many countries too-the UK. U.S.. Canada, Brazil and Sweden—a new generation of smaller airliners for commuter or "bus-slop" operations is blossoming, including the 80-100 seat four-engined British Aerospace 146, the new 36-seat twinenined Short Brothers 360, the de Havilland Canada Dasb 8 32-36 seat twin-engined feederliner, and the new Saab-Fair-child 34-seat eommuter airlioer.

has just entered service, while

Boeing is also planning another rival in the new Series 200 ver-

The aero-engine manufacturers world-wide are also busy, reflecting the demand from the airframe builders for their products. Rolls-Royce is fully committed with RB-211s in various versions of the Boeing 747 Jumbo jet and the Lockheed TriStar, and also for the new Boeing 757, and bas to double its production of the engine in 1980, and again in 1981, At the same time. It is pressing ahead with a new engine, jointly with Japanese companies, the RJ-500 new short-haul airliner designs for the mid to late 1980s.

Prohably the only significant

The UK industry	п
Military programmes	Ш
Helicopters	IV
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for personal and private use, and light transports for business executives and companies.

Farnborough

In the U.S. (the biggest source of such aircraft in the world) deliverles in the first seven months were down from 10,109 aircraft last year to 7,070 this year-although it is significant that this fall was concenin single-engined and multi-engined piston types. Turbo-prop deliveries actually rose by 18 per cent, to 446 aircraft, while jet deliverles were up by 13.2 per cent to 180 aircraft, reflecting the continued strong underlying demand for

CONTINUED ON NEXT PAGE



Helicopters

The successful association with Aerospatiale of France in the production of Lynx, Gazelle and Puma has led to orders of nearly 2.000 helicopters. This partnership continues. An Anglo-Italian company has been farmed with Agusta ta develop the EH.101, a new helicopter to replace the Sea King worldwide. Westland WG.30 civil and military transpart helicopter based an Lynx

Hovercraft

technology, is in production.

British Hovercraft Corporation is a Westland campany setting new standards of speed, comfort and passenger appeal with Super 4. In service with British Rail Seaspeed, Super 4 hovercraft can carry up to 60 cars and 416 passengers across the Channel in half an hour at speeds of up to 65 knots. In 1980 one in three passengers and cars will cross the short sea routes to France by British Hovercraft.

Over 60 British Hovercraft have been delivered warldwide.

Normalair-Garrett

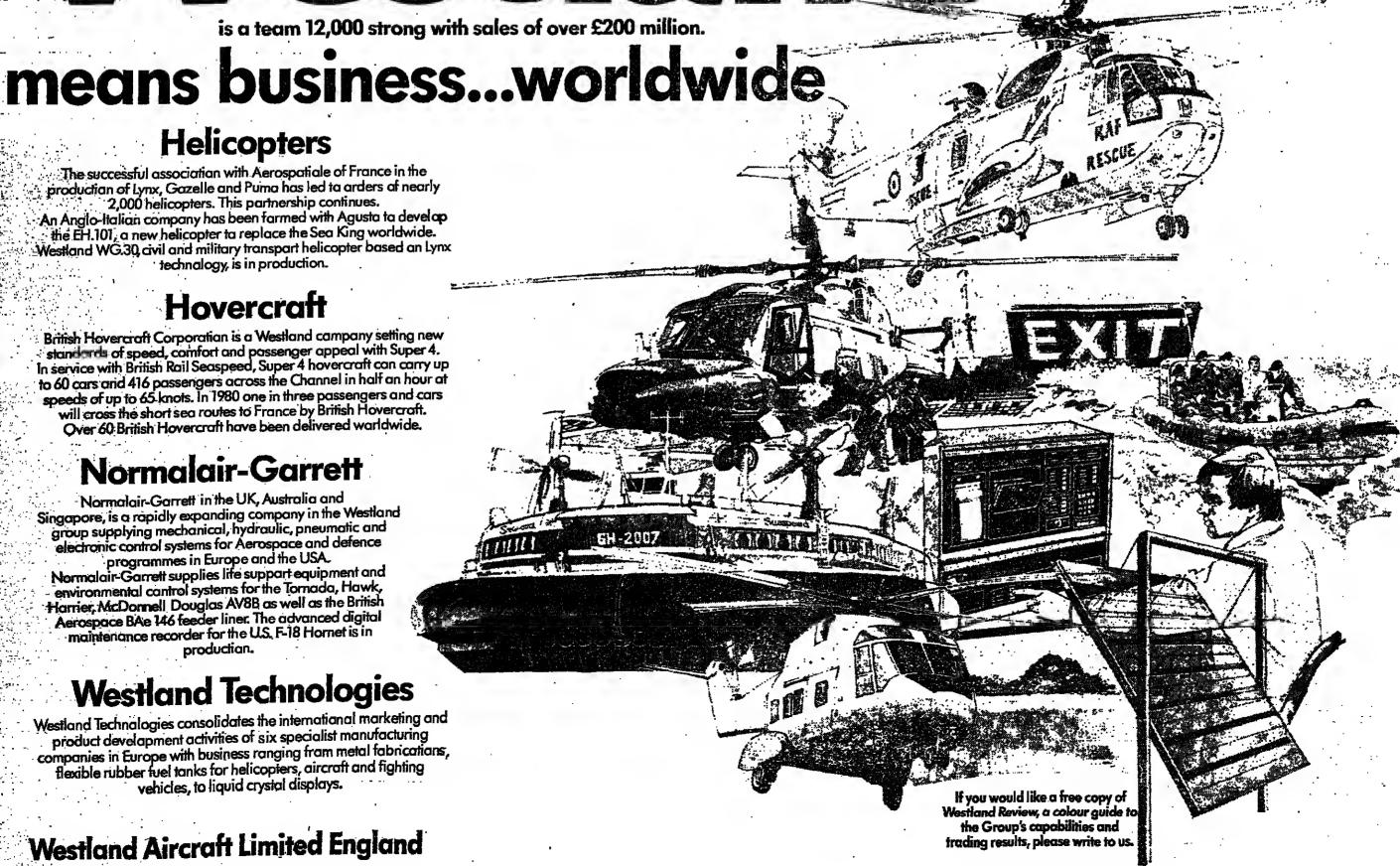
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Normalair-Garrett supplies life suppart equipment and environmental cantrol systems for the Tornada, Hawk, Harrier, McDonnell Douglas AV8B as well as the British Aerospace BAe 146 feeder liner. The advanced digital maintenance recorder for the U.S. F-18 Hornet is in production.

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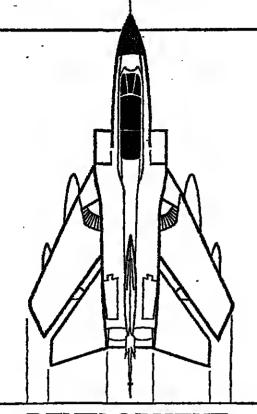
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UK industry at its busiest for years

THE UK aerospace industry is now busier than for many years past, with a wide range of civil military aircraft and missile programmes on haod that are stretching its capacities and resources and seem likely to keep it busy for several years

The biggest element in the industry is the State-owned British Aerospace, which in 1979 earned profits of £90m, on total sales of over £1bn, of which exports accounted for £576m. At the end of 1979 the outstanding order hook of the British Aerospace Group amounted to £3.3bn, of which exports accounted for no less than £2.2hn.

A substantial proportion of this order book is in turn accounted for by civil aircraft, which now occupy an increasing volume of total British Aerospace activity. Two major aircraft programmes are under way—the building of wings for the European A-300 250-seat and A-310 200-seat short-to-medium range Airbuses, and the manu-facture in the UK of the BAe 146 "baby airbus" nf 70 to 100 seats for short-range duties.

Total long-term investment in these two programmes will exceed £500m. For 1980 British Aerospace has set aside £39m for launching costs on new civil programmes, while an overall capital investment hudget for 1980 of more than £80m has been authorised by the BAe

On the 146 programme the first order has been received, from the Argentine, airline, LAPA, for two Series 100 146s seating up to 86 passengers, and one Series 200 aircraft seating up to 104 passengers. Options for a further three Series 200 aircraft have been received.

The 146 is a four-engined feeder-liner-type design, in-tended to bring air services to small communities which have not had it before. Thus it can he described as a "baby air-hus" in the most correct seose. for its role is to fly sbort distances over difficult terrain. using the most elementary air-fields and support services.

encouraging " response. Further orders are likely to be ancounced hefore the end of this

on its other civil pro-

ork is in progress on 20 airycoming of the U.S.

On the Alrbus programme major factories in the British Aerospace group are inolved in the design and manufacture of wings for both the A-300 and A-310 aircraft. On the A-300, delivery of the 134th set of wings was made recently. and additional jigs are being installed at Chester to allow for increased production.

For the smaller A-310 aircraft, further assembly jigs



The assembly line of the British Aerospace 146 feeder and short-haul jet airliner at Hatfield, Hertfordshire. Roll-out of the first production aircraft is scheduled for March next year

Total orders for all versions of the Airhus stand at over 415 ircraft, and Airhus Industrie is planning to ralse production from the present three aircraft month to 10 a month by 198a, which in turn will require British Aerospace to expand its wing production by corresponding amount.

As outlined elsewhere in this survey, Airbus Industrie is now studying the possibilities of developlog further types of Airbuses, including the new Series 600 version, as well as a stretched A-300 design, seata stretched A-300 design, seeding 350, and possibly also a new short-range "Single Aisle" some 370 operators who can use series of 132-162 sester aircraft aircraft of the size of the 748.

These operators collectively Fields and support services.

Encouraging

So far, in its marketing campaign. BAe salesmen have visited 180 alrlines world-wide, and have reported a "highly encouraging" response. Fur-

The first 146 is to be rolled out of its Hatfield, Hertfordshire, assembly line in March, 1981, with the first flight in May, with production building committed for several years improved progressively, and the shire, assembly line in March, shead oo the BAe 125 execu1981, with the first flight in tive jet aircraft, of which sales
Way, with production building up to have six aircraft flying by worth over £400m in exports the end of next year. Currently alone at today's prices. Pro
Dart, has been considered. The craft, and 25 sets of engines aircraft a month from the Chester assembly line, and work is under way on new developments of the aircraft.

The Jetstream 31 aircraft is believes has world-wide applications in the buoyant civil "commuter" airline and corporate transport markets. Fitted with new U.S. Garrett turboprop engines, advanced techoology propellers and new electrical air-conditioning and cockplt systems, the aircraft are being installed at Chester. cockplt systems, the aircraft interests. The distribution installed at Chester. cockplt systems, the aircraft interests. The distribution in the first A-310 wings are has aroused considerable interest and manufacture of tactition by a formed in due for delivery in late 1981, terest world-wide. British cal guided weapons systems: 1EMDG) was formed in with a first A-310 flight set for Aerospace is confident of a and the management of space December, 1979, by British Aerospace is confident of a space, Aerospatiale of France around the first A-310 flight set for Aerospace is confident of a space, around the management of space.

RAF now in negotiation.
The other major civil aircraft The other major civil ancient may under way at British Aerospace is the 748 twin-engined development, production and assuch is one of Viscount, having been in continuous production for over 20 years with sales of over 350 aircraft to date, worth around £400m in foreign currency.

There is clear evidence of a sustained increase in demand for turbo-props in the 40/50seat category, especially in the U.S., where as a result of deregulation there are now

are expected to need between 300 and 1.000 aircraft over the next ten years, while demand also remalos high in other parts

Difficult

As a result, production of the 748 will continue for years to come. The aircraft is being Dart. nowever. is eogine to replace, itself being progressively improved substantial life left in it. with

The military aircraft activitles of British Aerospace are tions Division is Britain's leada development of the original dealt with elsewhere in this ing space engineering contraction. Handley Page Jetstream air survey. But the other major tor, and the largest organisation liner, which British Aerospace sector of the group, the of its type in Europe. It is insector of the group, the Dynamics Group, is just as flourishing as the Alreraft Group. Dynamics has about Group. Dynamics has about 17,000 employees, and in 1979 had a turnover of close to £350m, of which a substantial

proportion was in exports. The Group has two main by the British, French and West interests: the design, develop- German Governments, the

with an initial order from the the design and manufacture of and space satellites, equipment and Blohm of West Germany, to electronic systems.

the largest guided - weapon design and manufacturing Later, EMDG wil be responsible organisations in the Western for other joint weapons proworld.

The major pro
Governments. the largest guided - weapon

Among the major pro-rammes of the Army Weapons Division at Stevenage are the development of the Swingfire long-range anti-tank missile (with sales of over £150m to date): the Rapier low-level anti-aircraft missile (with sales so far worth over £700m); and the complementary Tracked Rapier (mounted on an amphibious tracked vehicle); the Milan anti-tank weapon (being built under licence for the British Army); and gyroscopės, radomes and microwave com-ponents in reinforced plastics.

The Air Weapons Division at Hatfield is primarily engaged on the medium-range air-to-air missile, Sky Flash; the Sea Eagle air-launched anti-ship missile: and the Sea Skua, a

Dart, a multi-role anti-aircraft and anti-ship missile.
The Space and Communica-

of its type in Europe. It is in-volved in the design and con-struction of communications satellites, scientific satellites and equipment, solar arrays and the Skylark sounding rocket. Following the signing of a

Memorandum of Understanding

other State-owned aircraft company, is also fully engaged in manufacture of aircraft, missiles and "aerostructures," the name given to parts for aircraft and other related activities.

In the latter field the company manufactures pods for the Rolls-Royce RB-211 engines for the Lockheed Tri-Star, Boeing 747 Jumbo jet and the new Rosing 757, and pods for over 580 RB-211s of various versions have been delivered. It is also making pods for the Avpo Lycoming ALF-502H engines for the new BAe 146 feeder-liner Airframe component work includes multi-million pound con-tracts for main landing gear doors for the 747, a range of flight and structural compoponents for the TriStar and inner wing flaps for the 757, four-hundred ship-sets of which were ordered by Boeing last were ordered by Boeing last September, in what for Shorts-was the biggest single order in its history.

Missiles

Messerschmitt-Bolkow-

design and build new guided

weapons systems on a European basis. The initial project for the

group is to develop third-

generation medium- and long-

range anti-tank guided weapons. Later, EMDG wil be responsible

a wide range of programmes and is highly profitable, and partly also because it already works in

an intensely competitive inter-

Virtually all of the top man-

agement of the group bave worked in the competitive arena

of international aerospace for

years, before the creation of

BAe by the nationalisation of

British Aircraft Corporation, Hawker Siddeley Aviation and

Hawker Siddeley Dynamics. The

national environment.

Missile systems currently in production include Blowpipe, a supersonic sboulder-launched weapon designed primarily for the defence of land forces against low-level air strike; the anti-ship guided and its land-based Seacat derivative, Tigercat.

But Short Brothers is also

now active on a range of three small transport aircraft the Skyvan cargo aircraft, the 30-seat 330 "commuter liner," and its recently-launched bigger version, the Series 360 36-seat airliner, on which £15m is to be spent on development, with a first flight scheduled for next year and entry into service in

Short Brothers sees a poten tial world demand for some 1.000 short-haul aircraft in the 20-40 seat bracket during the current decade, with the majority of the market being in the U.S., where the "deregulation" policy of 1978 has helped At the same time the same three companies, through a jointly owned company, Anti-Ship Euromissile (ASEM) are already working together on the requirements for a future antito stimulate demand for in-creased "commuter" or local

ship missile. It is intended to incorporate ASEM into EMDG airline services.
The success of the 30-seat 330 sircraft, of which over 70 worth as soon as is practicable.
The Government is planning eventually to carry out a partial more than £75m have already denationalisation of the Statebeen ordered or optioned by 19 airlines (more than half of them owned aircraft manufacturer, by selling off a substantial minority of the shares to the private U.S. operators), indicates that the wide-body, high-economy concept epitomised in the 330 investor. So far, however, the Government has given no indication as to the precise extent of any such sale of the company believes that with shares, or when it is likely to the additional introduction of take place.

The prespect of such partial The prospect of such partial missile.

The Bristol Division, which coocentrates on naval weapons, is involved on Sex Wolf, an anti-missile missile; and Sea currently heavily according to the worrying the top 380 model will be running at maximum rate by 1983, thus entire continuity of employment and sea currently heavily according to the 3.000 nearly according to the same anti-missile missile; and Sea and 350 aircraft in the overall aircraft production in the com-

> Short Brothers is one of the biggest employers in Northern payroll at present, using to about 7,000 over the next year as the series 360 production builds up. Last year, the company's exports reached a record figure of over £45m, accounting for more than two thirds of the £67m turnover and turnover in the current year is expected to exceed £100m.

Michael Donne

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bring. The U.S. General Aviation Manufacturers Association the economy itself improves in

level, reflecting the very longterm nature of the aerospace

Strip

Tube

Angles and Extrusions

Military aircraft demand is expected to remain buoyant remains confident of a swift through the 1980s. Despite presupture in deliveries as soon as sures in some quarters for disarmameot, the fact remains that increasing emphasis is being In other areas of aerospace placed in many countries, activity, despite the recession, especially in the Third World. husiness continues at a high for the development of air power, with particularly strong demand for light tactical combat aircraft.

worth an estimated £50bn, inequipment.

Guided weapons husiness is also very strong, and is expected to remain so through the rest of this century. One estimate is that the value of such business could amount to as much as £45hn throughout the Western world up to the end of this century, involving per-haps as many as 800,000 missiles of all kinds, including a massive 500.000 anti-tank missiles worth

over £12bn.

Thus, the combined total volume of business for military aircraft and weapons through to the end of this century is not likely to he less than around £90-£100hn. and may well amount to considerably

New helicopter

Major new aircraft development and production programmes now under way include the European Tornado military programmes, taking multi-rele combat aircraft, several years to mature, is such Italy at an estimated cost of the recession. Moreover, the well over £8bn. New military financial. technological and programmes under considera- sociological necessity for most European Comhat Aircraft by the UK. West Germany and husiness, notwithstaoding the France; a new helicopter for immediately gloomy traffic and anti-submarine warfare now revenue statistics emerging being studied by the UK and from the air transport industry.

demand continues aircraft of all kinds through the steadily for combat aircraft of coming decade is expected to be various kinds, and new pro-not less than 5,000 aircraft, grammes are being studied by the U.S. Air Force (for hoth an cluding spares and support Enhanced Tactical Fighter and a oew trainer aircraft to replace the T-37), while the U.S. Navy is studying plans for new trainer, and the U.S. Marine Corps is still strongly interested in the Advanced Harrier, the AV-8B.

In all these ventures, inter-national collaboration is a significant element. On both trainer programmes, many in-ternational companies are team-ing up with U.S. companies in order to win a share of the eventual business which could he substantial—over 700 aircraft for the U.S. Air Force and perhaps over 1,000 aircraft for the U.S. Navy. Aerospace, therefore, has no

need to worry unduly about the effects of the current recession provided it is as cyclical and short-lived as many in the industry believe it will be. The loog-term nature of civil and which covers 809 aircraft for that they will be able to bridge the UK, West Germany and the worst economic effects of tion include the possibility of a major airlines to re-equip by the mid to late 1980s will also (ECA), which is being studied result in a continued volume of

lf this year's Farnborough Italy, and several major new If this year's Farnborough missile ventures, including the show demonstrates anything at Advanced Short-Range Air-to- all, it is that the world aero-Air Missile (ASRAAM), and space industry is not only Advances Medium-Range Air-toAir Missile (AMRAAM) jointly
by the UK, U.S. and West
Germany.

On the other side of the look forward to in the years

> .

prospect of a partial return to private ownership, therefore, is Graviner has <u>complete</u> fire protection systems for every aircraf you can think

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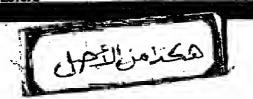
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Military demand stays buoyant

DEMAND FOR military aircraft and guided weapons during the 1980s is expected to remain high. Although specific forebigh. Although specific fore-casts are difficult to come by because of the sensitive nature of the market, it is generally accepted that upwards of 5,000 new combat aircraft of all kinds new compat aircraft of all sings are likely to be built throughout the Western world by 1990, worth in excess of £50bn, including spares and support costs through the lives of the aircraft to the least possible cost. But at the same time there is bound to be a continued demand to be a continued to in operational service.

This estimate is based on the

fact that, despite the emphasis superiority, and multi-role placed in some countries of the West on disarmament, the NATO countries alone are pledged to increase their arms spending by 3 per cent a year in real terms in the years immediately ahead — a figure that may well be increased if international tensions remain high At the same time many

developing nations throughout the Third World are also building up their armed forces, with considerable emphasis being placed upon combat aircraft, especially light tactical combat aircraft which are cheaper to buy than bigger, more complex types such as the European Tornado or the U.S. McDonnell Douglas F-15 or General Dynamics F-16, the Grumman F-14 Tomcat or the McDonnell Douglas/Northrop F-18 Hornet.

tion of a continued high level role combat aircraft, in which of military aircraft develop- over 70,000 workers in three ment is the fact that in many countries—the UK, West Gercountries, many existing aircraft types are ageing, and will need to be replaced by the middle to late 1980s.

There are more than 5,000 the Italian air force. Phantoms and over 1,000 Starfighters in service, for example, along with more than 400 Jaguar jet strike-trainer aircraft, which by the 1990s will need, to be replaced. Even allowing for a replacement rate of less than one for one (dictated by the rising cost of modern military aircraft, and the increasing sophistication of their weapons systems) it seems likely that the forecast of over 5.000 new combat aircraft of all kinds over the 1980s could prove extremely conservative.

The view held by most major military aircraft manufacturers is that the bulk of these new aircraft are likely to be in the smaller, less expensive light to the aircraft tactical combat aircraft categorles—aircraft, for example, of about the size of today's British engined military aircraft that

all

fighter, or the Northrop F-5, largely because these aircraft are cheaper to bny, and because the requirement for new combat aircraft will be for larger, more sophisticated aircraft, to fill the strike, air

Among major new competi-tions for advanced military air-craft for the late 1980s and beyond is the U.S. Navy's hunt for a new fixed-wing trainer, the VTX-TS competition, for which upwards of 1,000 aircraft avorturily eventually may be required. Several major international companies have teamed up with U.S. companies to submit designs for this competition, with British Aerospace of the UK offerng the Hawk in con-function with McDonnell Douglas of the U.S., and Dassault/Breguet-Dornier of France and West Germany joining with Lockheed to offer the Alpha Jet.

314 ordered

The biggest individual military aircraft programme Also supporting this expectamany and Italy-in more than 500 companies are building 809 aircraft for the RAF, the Luftwaffe, the German Navy and

> So far, 314 aircraft out of the eventually planned 809 bave been ordered (in addition to 16 prototypes and pre-series production aircraft), and a contract for a further batch of 162 production aircraft has been recommended by the Chiefs of Staff and is expected to he placed soon, to maintain the tempo of production during the early to mid-1980s. Output Is now at 91 aircraft a month. Already, the first deliveries of the aircraft have been made to the three-nation Tornado Training Establishment at RAF Cottesmore, Lincolnshire, where pilots and navigators from the three countries will convert on

Aerospace Hawk or the Franco- will be capable of flying at more

forward battle zone, requiring large weapons payloads and ex-cellent manoeuvrability;

Interdiction/counter air strikedescroying the enemy's ground installations, supply depots, airfields and communications; Naval strike—delivering a wide variety of weapons in all weathers against ships and coastal installations; Air Superiority-denying the

freedom of the air to the enemy and giving protection friendly ground forces; interception/air defence long patrols far out over the Atlantic to destroy incoming

enemy hombers at high altitude, while long-range reconnaissance at all beights is also essential to the planning of ground and air operations in war-time: Training—a training version of the aircraft is being bullt. is intended that 165 will be the

special Air Defence Variant (ADV), which will go solely to the RAP for the interception/ defence role for which Britain has been given the responsibility by NATO. All the rest of the Tornado aircraft will be of the basic Interdicter Strike (IDS) version, in fulfil all the other roles mentioned. In addition to its 165 ADV aircraft, the RAF will get 220° of the IDS version, while the West German Luftwaffe and Marineflieger (German Navy Aviation) will get 324 IDS air-craft, and the Aeronautica ifilitaire Italiana will get 100

With an average price of ahout £10m for an IDS Tornado, and rather more for the highly soccialised ADV, the overall cost of the programme is now likely to be over £10hn if spares and support costs are included. with research and development, making it without doubt the higgest single military aircraft venture undertaken in Western Eurone. The Torrado programme is

IDS aircraft.

the responsibility of Panavia. a three-nation company specially set up to run the venture. and comprising British Aerospace in the UK, Messerschmitt-Bolkow-Biohm of West Germany and Aeritalia of Italy. The RB-199 engines for the aircraft are the

being studied in Western Europe—a plan for a "Euro-pean Tactical Combat Aircraft," jet strike aircraft in the RAF, the Phantoms in the Luftwaffe, and Mirage combat aircraft in the French Air Force.

Common design

For some time the aerospace industries of those three possibility of evolving a common design to meet the varying requirements of the three in France. countries. Earlier this summer broad agreement on the feasibility of such a project, and Of the 809 aircraft involved it they urged their governments to authorise the programme to go ahead. Since then studies have continued, and a decision from the three governments on the next phase of the programmedetailed project definition

studies-is now awaited. It is clear, however, that such a programme will be expensive. In view of inflation in all three countries involved, the eventual flyaway price of such an air-eraft is unlikely to be much less than £5m, so that if the full total of about 700 aircraft as currently envisaged is built the overall cost, including research and development, is not likely to be much less than £4bn, and could be considerably more. There bave already heen cxoressions of concern by the West German Government at the nossible high cost of such a venture, and it is always possible that either of the other two partners may also decide it is too expensive. But no one country can do it

alone hecause of cost. There is only one alternative. therefore. to developing such an aircraft on an international collaborative basis in Europe (there being no doubt at all in the minds of the air staffs of the three countries as to the need for such an aircraft) and that is to huy a ready-made tactical fighter from the U.S. This is regarded as an un-

than twice the speed of sound (Mach 2.2 or 1,300 mph) at great beights and also a supersonic speeds of low levels. The company, Turbo-Union which comprises Rolls-Royce of countries, which would see in the UK, Motoren-uod-Turbinen such a decision the virtual sonic speeds of low levels. The alreraft is intended to fulfil a number of major roles, which includes:

While substantial effort is manufacture on this side of the whole basis of advanced military aircraft manufacture on this side of the Atlantic. Thus it seems likely the UK, Motoren-uod-Turbinen such a decision the virtual Union of West Germany and abandonment by their Governprogramme, another major new Atlantic. Thus it seems likely military aircraft venture is that before the ECA venture finally gets rolling, there will be some substantial political manneuvring in its favour by or ECA, to replace the Jaguar the air forces and especially also the aerospace industries of the three countries. Much more is likely to be heard of the ECA the mooths immediately

> One of the problems confronting the planners in trying to reach a common ECA is that the various Air Staff requirecountries have been studying at ments in the three countries their governments' request, the are markedly different—AST-possibility of evolving a common 403 in the UK. TKF 90 in Western Germany and ACT-92

UK itself has to take a decisioo soon on another major new alreraft venture—the development of the British Aerospace Harrier Mark 5, for service from the mid-1980s onwards. The prime need of the RAF in this area is for an aircraft capable of carrying a bigger parload over longer distances. with a better air-to-air combat capability in addition. Analysis of the design studies already produced by British Aerospace have shown that the Mark 5 can meet all the requirements specified by the RAF as necessary for a battlefield support aircraft in service from the mid-1980s to beyond the end of this century.

There has been speculation that the Harrier Mark 5 and the AV-SB Advanced Harrier designed by McDonnell Douglas of the U.S. (in conjunction with British Aerospace) to meet a requirement for the U.S. Marine Corps are in direct competition, with an "either/or" situation developing. This is demonstrably not the case, since each aircraft has been designed for

aerial "homb-truck" that meets the needs laid down by the Dowty, Plessey, Fairey, Dunlop, Marine Corps, with not only an etc.) up to 1990, could amount

This was reflected in the difthe industries submitted a report to their governments appearing at the recent Hanover Air Show, and it seems likely that there will bave to be some considerable further international discussions before common programme evolves. In addition to the ECA, the

minimal servicing requirements which the U.S. Marines find essential in their amphibious

satisfying what can be described of British Aerospace itself. as the austere basing and Looking much further ahead.

assault roles. The Mark 5 Harrier, on the other hand, responds to a much more sophisticated requirement for a low-level fighter/attack aircraft capable of surviving in the hostile North-West Euro-pean NATO environment.

As a result of recent action in the U.S. Congress, funding is now firm for four full-scale development AV-8B aircraft, the first of which will fly at the end of 1981. Providing funding is continued by the U.S. Govern-ment, 12 pilot-production aircraft flying from 1983 will lead to the first squadron of produc-tinn AV-8Bs entering service with the U.S. Marine Corps in 1985, Some 340 aircraft could be built for the Marines,

British Aerospace is a sub-contractor to McDonnell Douglas and will supply about 30 per cent of the work in the AV-SB airframes, Rolls-Royce will supply over two-thirds of the work done on the Pegasus different roles and missiles.

The AV-8B for the U.S. engines for the aircraft. The value of this work (including Marine Corps is an efficient contributions by other UK aerospace contractors, such

excellent bombload and radius to no less than £600m of which of action, but also capable of about a third would be the share

The Tornado Air Defence Variant fitted with four Sky Flash missiles under the

fuselage and two self-defence Sidewinders and long range tanks on the wing

although the latest generation of fighters such as the McDonnell Douglas F-15 Eagle and General Dynamics F-16 is now moving into service in increasing numbers, the major U.S. military aircraft manufacturers are already looking to the 1990s, when it is recognised that a new generation of advanced combat aircraft may be needed. to meet whatever new developments the Soviet Union will bave by then undertaken.

By then the F-15 itself will be more than 20 years old in terms of design concept, and although its weapons and other systems can be progressively up-dated to keep abreast of enemy-combat aircraft development, by the middle to late 1990s an entirely new design concept for this and other combat aircraft is likely to be reeded.

U.S. Air Force and the Govern-ment-sponsored National Aeronautics and Space Administration have already financed an unmanned combat aircraft research vehicle, the Rockwell International "Himat"—highly manoeuvrable advanced technology aircraft - which incorporates a substantial number of

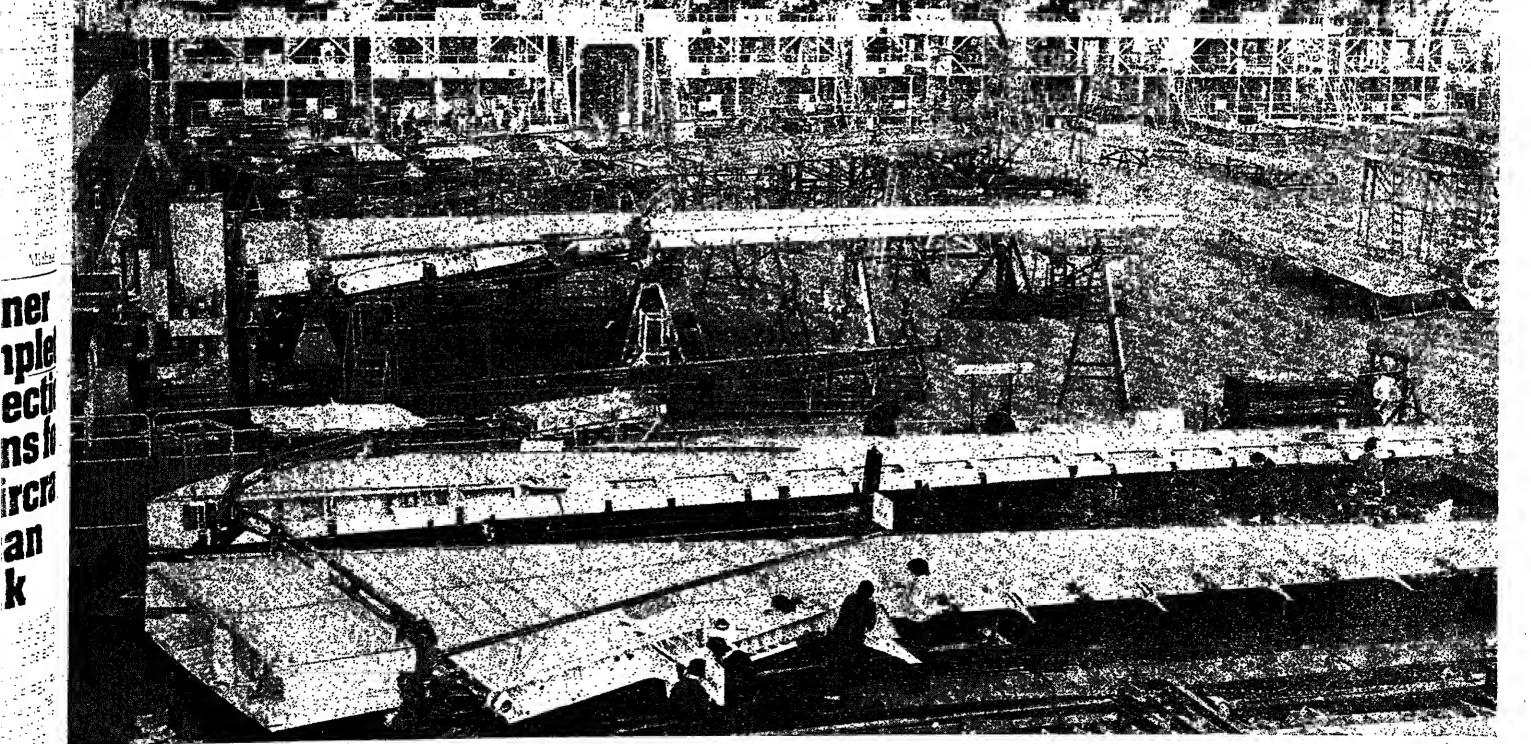
To study such concepts the

new design features of the kind likely to be incorporated in any new comhat aircraft.

Making considerable use of advanced composite materials. Himat, which is launched from a B-52 "mother-ship" for a series of research flights, is a supersonic vehicle capable of sharp twists and turns in flight, pushing the frontiers of fighter design ever further forward. At present, two Himat aircraft are flying. but more advanced models may be developed during the 1980s.

U.S. interest in future combat aircraft design does not stop with airframes, however. Re-cently, the biggest U.S. aeroengine builder. Pratt and Whitney, revealed that it had begun the development of a new jet engine for the next generation of fighter aircraft. Called the PW-1120, the engine would be based on the existing F-100 en-gine used in the F-15 and F-16 aircraft. It will be a turbo-jet, of around 20,000 ib thrust, for both single-engioed or twineogioed fighters.

The company is using its own funds to finance the three-year development programme to take the engine up to flight test stage, and production of fully qualified engines will begin in 1985.



Winning ways with wings

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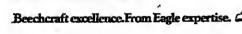


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So it's hardly surprising that many successful British companies operate the Super King Air 200. The reasons are obvious.

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Several aircraft in the market could meet some of

But the Super King Air 200 answers them all in a

unique combination that has impressed leading

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businesses both in Britain and throughout the world.

of the Super King Air 200, its economics and benefits and for information on the management and services



Sales of non-military helicopters expected to grow dramatically

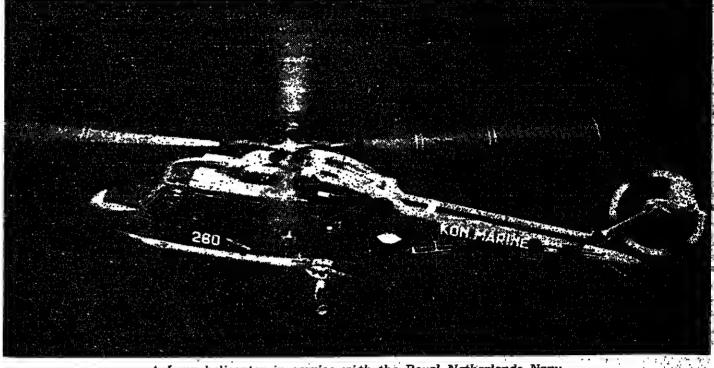
DEMAND FOR helicopters is expected to continue to grow rapidly during the 1980s, as a result not only of continued sustained demand for military aircraft of various kinds but also as a result of new developments on the civil side of the helicopter manufacturing industry which are resulting in aircraft specifically designed for a wide range of non-military

All analysts in the U.S. and Europe agree that by the 1990s the civil market will have overtaken the military, in terms of numbers of aircraft hought per year.

Total free-world production of helicopters is now running at about 2,000 aircraft a year, with a civil and military fleet of about 20,000 aircraft, of which about half are in the U.S. and a quarter in Western Europe. Of this 20,000, about 60 per cent is military, but this proportion is changing as civil aircraft procurement expands.

The eeneral conclusion among all helicopter manufacturers is that the business nutlook is good, provided manufacturing costs can he kept down.

Hitherto, helicopters for civil use have been derived directly in service have been more desirable design factors than econand even styling. Inevitably, the ally. civil models which have been derived from the military models have not heen either the most economic or the most elegant flying machines, and sales have thus remained com-



A Lynx helicopter in service with the Royal Netherlands Navy

mined attempt by the major weight-lifting capabilities; and belicopter manufacturers to an extensive simplification of meet the rising demand for good from military models. As a remeet the rising demand for good sult, ruggedness and reliability quality, economical civil aircraft, in which some major new technological breakthroughs omy of operation, with little have heen achieved, the oppor-regard heing paid to such matters as comfort for passengers sales have expanded dramatic-

Among these new techyological hreakthroughs have been improved lifting capability stemming in turn from improvements in power-plants and rotorblade design; greater use of aratively low. high-performance composite
But as a result of a deter-materials, leading to greater

components, leading to cheaper running costs and easier main-

At the same time, the range of civil uses for helicopters is itself expanding. Whereas in the past the helicopter has been used largely where its convenience has been paramount-for example, in search and rescue where its ability to hover has heen tha vital factor, or in other emergency roles where its ability to land and take off in small spaces has been essential -now the emphasis is changing.

Small cahin helicopters are challenging the small fixed-wing cabin aircraft in economic operations over short distances of up to 200 miles or so, while also enjoying the helicopter's unique ability of dispensing with runsophisticated airfields. Increasingly, busloessmen are turning helicopters as "airborne cars." able to go virtually anywhere at will over short dist-

The off-shore oil industry, which has been the cornerstone of the civil helicopter market In recent years, is expected to grow even more rapidly with the advent of new cahin of the UK, West Germany, design engineers and expendi-machines such as the seven-to-nine-seat U.S. Bell 222 and the helicopter collaboration, the around £20m to £30m a year. 12-passenger Sikorsky Spirit. European Helicopter Corpora-The purpose of E.H. In-

heavy helicopter is likely to revolutionise the transport of men and materials from shore hases to off-shore rigs and platforms. For the commercial Chinook can carry up to 44 passengers over distances of 650 nautical miles non-stop, and a bigger version carrying 66 passengers is under consideration.

New uses

There is also increasing use of helicopters by non-military government bodies, such as the police, medical services, Customs and Excise, and coastguards, while new uses in ganeral commercial roles continue to be found—in lighthouse relief work, for example, or in lifting beavy objects (such as elevator machinery) to the tops of multi-storey buildings, as well as in civil engineering, surveying, forestry work or in aerial agri-

In the U.S., Bell and Sikorsky are currently the laading manufacturers of civil helicopters, with the Beli 222 and the Sikorsky Spirit both selling well.

In Western Europe Aérospatiale of France bas also been a dominant company in the civil helicopter field, in particua twin-engined 14-seat aircraft; and the six-seat single-engined Agusta bas developed its A-109A twin-engined, seven-passenger, general-purpose belicopter. In Western Germany Messerschmitt-Bolkow-Blohm has developed the BO-105 series of light helicopters, and is now Kawasaki of Japan the 8-10-seat multi-purpose BK-117 heli-

In the UK, Westland Hell-

conters has devoted most of its

attention in recent years to the development of aircraft for the military market, but is now also turning to the civil market.
The multi-role Lynx belicopter has been particularly successful in dominating the NATO market for frigate-hased anti-suhmarine belicopters. The Army Lynx is in service with the British Army, and strong interest in it has emerged in Belgium, Holland and Germany. But competition in this class of aircraft is fierce, and Westland has yet to achieve the major sales needed to offset the loss of the prospective husiness from the now-defunct Arah Organisation for Industrialisation (AOI). The company's Sea King anti-submarina warfare aircraft and its Commando tactical transport variant also continue to sell well overseas, with a buoyant market expected to be suslained through the

The company has now also produced the WG-30 tactical transport helicopter, a twinengined aircraft designed to carry up to 21 passengers over. distances of up to about 300 miles at a speed of about 145 knots. In hoth civil and military versions, Westland foresees a potential market for the WG-30 of around 400 aircraft through the 1980s. customer mock-up" of the

WG-30 in British Airways' colours will be seen on the company's stand at the fortb-coming Farnhorough Air Show.

Throughout Western Europe,

much emphasis in recent years has been placed nn trying to reach international agreement for development of the next generation of helicopters for military (and possibly also eventually civil) use through the 1980s. A successful international link was arranged years agn hetween the UK and France to develop the now familiar Gazelle light belicopter, the Puma tactical transport hellcopter and the Lynx multirole aircraft.

helicopter development, in-cluding a four-tonne anti-tank helicopter; a six-tonne aircraft. for tactical air transport; and a ten-tonne aircraft for anti-

But implementing these ideas on a four-nation hasis has proved difficult, and the most recent development bas been the formation by the UK and Italy of a separate organisation, by Westland Helicopters and Agusta, called E. H. Industries, on a 50-50 basis.

The aim is to design and develop a common helicopter, known as EH-101, to meet the requirements of the Royal Navy, the Marina Militare Italiana. and military export markets, for a replacement for the Sea King and SH-3D anti-submarine helicopters, and also to meet future civil requirements for an aircraft suitable for off-shore and other operations.

Westland and Agusta estimate the total market for the EH-101 at around 750 aircraft outside the U.S. and Warsaw Pact countries.

There are, as yet, no signs of a parallel operational require ment emerging in West Germany and France, so that the EH-101 is not yet a Pan-European · programme, But Aerospatiale of France is understood to be keen to jointhe venture, and may play a part later in the develope of the civil variant.

Three engines

The EH-101 will be a three-engined aircraft, using initially the U.S. General Electric T-700 engines, although different engines may he used in production models—perhaps the Rolls-Royce Turbomeca RTM-321. Although there will be a strong common element in the avionies equipment to be used by both the British and Italian versions of the aircraft, weapons and other equipment "fits" will be different for each country, and Some two years ago, follow systems integration tasks. At ing an agreement in principle Westland the EH-101 team; hetween the Defence Ministers already involves some 300

tion (EHC) was formed. Since dustries is to receive develop-then, this body has identified ment, and later also production, contracts from the joint British to distribute the work on 50/50 basis between Westland Helicopters and Agusta. The financing and management are governed by a series of international governmental: "Men oranda of Understanding," th second of which is due to be

> This will establish the join government procurement agency, and initiate the flow of development funds

> E.H. Industries is registered company, with offices in Sloane Street, London. The board comprises Lord Alding ton, chairman, and Mr. Basi Blackwell, chief executive, of Westland Halicopters: Count Corrado Agusta, Agusta, and Dr. P. Fascione chief executive of the Halian



(Sea King Mk 'Commando '' helicopter in action demonstrating transport heavy loads



With the new McDonnell Douglas DC-9 Super 80, the high-noise area around airports is just one-fifth of what it is with today's comparable aircraft. It's the first big jetliner to meet the new U.S.A. and international noise requirements for the 80s and beyond.

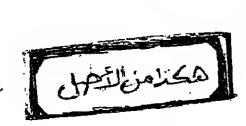
The Super 80 also offers airlines the lowest operating cost per seat mile of any aircraft in its class, plus the lowest fuel consumption per passenger of any commercial jetliner, up to its maximum range. That's 40% better on fuel than today's most widely-flown jetliner. Commonality of maintenance and support systems helps keep costs down, too.

The Super 80's new cockpit boasts the first systematic application of simple, reliable, lightweight and highly accurate digital technology in an airliner. The result: lower cost, more capability, and reduced flight crew workload.

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The quiet, comfortable, fuel-efficient DC-9 Super 80. It's precisely what airlines need for the 80s and beyond.

DC-9 Super 80 MCDONNELL DOUGLAS



Airlines face painful batch of problems

might have been thought three

years ago, when the CAB embarked on the domestic de-

regulation experiment," saya

he believes it is necessary to

and adapt the evolution of

intelligently to the cyclical

movements of our environment"

transport is subject to a five-

"For example, 1970 and 1975

were particularly poor years for airline finances, whereas in

1973 and 1978 airlines enjoyed

their best profit performances of

the 70s. We are now in 1980

and an international recession

He foresees a period in

which costs will overtake

improvements in performance

by the airlines, with lower load

factors resulting, followed by sharp cutbacks in service, and

severe financial problems world-

hankrupt policies can quickly lead to bankrupt airllnes. Per-

haps the current sombre

scenario will prompt in the 80s

a re-evaluation of International

"We have a climate in which

year cyclical evolution.

Load factors

is taking off."

Mr. Hammarskiold.

THE WORLD's airlines are now facing an almost unprecedented series of problems that are collectively depressing not only traffic growth but even threaten in many is sinces the financial wability of some of the major carriers.

Foremost among these difficutties is the soaring cost of fuel, while its present limited availability in some places and the longer term prospects of even more severe shortages, are also a worry. In addition, inflation is pushing costs in other directions even higher, such as labour, landing fees, exclude navigation and other charges. This is generating the inevitable pressures from the airlines for the increasea in fares, at a time when many consumerist groups are push-ing the other way, for reductions in fares, especially Western Europe and the

reacy fluctuations, which have of this year, and a drop of another sixth reported operating severely affected the revenues anything between 5 and 10 per profits of more than 10 per cent

As if all this were not a whole. enough, the spectre of recession has also emerged in some parts of the world, again especially in the U.S. and Western Europe, although in some parts of the Third World traffic rentains bouyant. To cap the airlines' problems, there has been in the past two years rate of traffic growth may be the attack on the world airlines major trade association. the International Air Transport Association (IATA), by the U.S. Civil Aeronautics Board (CAB), aeeking to remove that body's with traffic actually declining to immunity from U.S. anti-trust levels below that of last year, laws, with a further more The effects on the airlines' laws, with a further more The effects on the airlines and impose a measure of de-recent attack on the IATA's finances are also now showing regulation on international air

The world's airlines are being per cent of total operating squeezed dry by soaring costs, revenues of \$70.5bn. skt-high loterest rates, diminisbing yields and nose-diving out of these operating profits profits. Many carriers are in the red. What we need today rates on fleet re-equipment pro-are practical and imaginative grammes, together with taxes to approaches to these real-world governments, it seems obvious problems, not idealistic, theoretical and too often politically motivated economic



McDonnell Douglas of the U.S. is now developing a twin-engined short-to-medium range airliner, the Advanced Technology Medium Range transport, now to be known as the DC-XX. A formal launch commitment for the aircraft is expected

lems are already being seen in about a sixth of all scheduled declining traffic. In the U.S. the airlines incurred operating airlines bave been hit harder On top of this, the airlines than elsewhere, with traffic on have had to face in the past year, or so some sharp cur-3 par cent in the first quarter cent expected for the year aa

Showing up

Elsewhere in the world the drop has not been so marked, but it bas occurred, and it is generally anticipated that for 1980 as a whole world-wide the cut back to about 3 to 5 per cent, against, the 10 per cent expansion of 1979, while in some parts of the world growth may even disappear entirely,

travel agency arrangements in up. According to the Inter-the U.S. up. According to the Inter-national Civil Aviation Organ-According to Mr. Knut isation (ICAO) the total Hammarskjold, director-general operating profits of the world's of the IATA, "this is a time scheduled airlines last year of brutal financial realities, amounted to only \$700m, or 1

When it is borne in mind that must come such Items as interest that many of the world's airlines are losing money.
According to the ICAO, in

during the next few months airlines incurred operating losses, a third reported operating profits of 5 per cent or less, another third had profita between 5 to 10 per cent while

of revenues.

Mr. Hammarskjold does not mince words about the current situation. "The deteriorating world economic situation will shape the pattern of airline development for the next few years, perhaps even a decade, deregulation or no deregula-tion." This is a reference to This is a reference to the U.S. deciaion to try to stimulate airline competition by removing many of the regulatory controls over routes and fares in that country while at the same time so framing its approach to international civil aviation negotiations as to try services to and from the U.S.

attacked this policy vehemently.
"I firmly helieve that a gradual liberalisation in the regulatory environment, and a reasonable measure of competition, are beneficial to consumers and airllnes alike. I helleve, however, that policies of instantaneous deregulation and unbridled competition can only result in cuttbroat pricing and duplication of services with adverse impacts on airline profitability and fuel ntilisation.

Hammarskjold has

"I am concerned that, with ogwash."

1978 (the last year for which escalating operating costs and a line of serving the public as mean that the airlines must get remains to be seen but at least are becoming unacceptably. The effects of all these prob- detailed statistics are available), worsening general economic adequately and cheaply as the government approval for any the airlines feel it is better noisy in an increasingly environ-

of member-States of the ICAOthe United Nations-which amounted in 1973-74 to about \$524m (excluding the Soviet tional, Union) are estimated to have reached \$7.4bn in 1979-80, or nearly 14 times as much.

The cost of fuel oer U.S. gallon, which amounted to 20.59 cents in 1973-74, had risen by 1979-80 to 83.5 cents, and this figure is expected to go on rising. Forecasts hy most airlines and aircraft manufacturers agree that an average price of \$2.80 or more per U.S. gallon world-wide by 1990 is not im-

environment, the scope for possible. liberalisation and low fares today is more limited than The effect of such rises on the airlines' own costs has been to raise the fuel element of direct operating costs from a level of around 11 per cent a few years today, and this proportion is

expected to rise further. In today's economic climate. take things "a step at a time. international air transport He believes that world air

> But the airlines have also suffered from a reluctance by a result there is now a gap the alrlines are effectively being being further unnecessarily squeezed. To meet this situation, the

they can automatically raise fares hy certain amounts when fuel prices rise, without baving to keep calling special farespolicies without losing sight of fixing conferences.

the objective of any efficient air- This mechanism will still

financial environment, largely fare rises they may wish to created by governments, will make, while the formula itself ermit." must also be accepted by The severity of the fuel governments before it can beprice increases of recent years come effective world-wide. So can he gauged from the fact far, over 20 of the 100-plus that the fuel bills of the airlines governments whose airlines are members of the IATA have the aviation technical agency of approved the scheme, so that there is still a long way to go before it can become opera-

> But throughout the past few diplomatic pressure by the airlines and the LATA itself on reluctant governments, and it is this year, enough of them will have agreed to enable the formula to become effective.

Comulative

Basically, the formula involves calculating the effect on airlines' operating costs of fuel price rises in three-monthly periods for every route area in the world. If there is less than a 1 per cent rise in their operating costs directly attributable ago to more than 25 per cent to fuel price rises in any area, no action will be taken expected to rise further.

The airlines have had little alternative but to seek to pasa on these fuel price increases cumulative. If there is a rise directly to the consumer in the of more than 1 per cent, but form of higher fares, because less than 3 per cent, an increase less than 3 per cent, an increase they cannot absorb them on top in fares of the same amount of inflation in other directions would be made, covering flights -rising labour charges, dearer in that area. If the rise in landing fees, en route navigation costs is more than 3 per cent charges and other facility costs but not more than 4 per cent, such as parking fees at airports. a flat rise in fares of 3 per cent would occur.

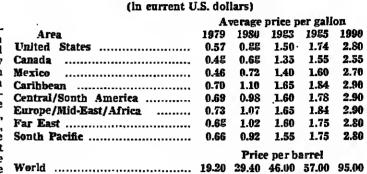
If the rise in costs is above governments to allow them to 4 per cent, but below 6 per pass fuel prices on to the cent, there would be mail vote passengers quickly enough. As of the airlines concerned on a hetween fuel price rises and amount with a fares rise of compensating fare increases 3 per cent becoming effective which at any one time amounts in the event of a disagreement to more than \$1hn-cash which among the airlines. If their costs rise by more than 6 per denled, so that their liquidity is cent directly as a result of fuel price increases, they would hold a special fares meeting to consider what action to take.

airlines collectively through their trade association, the IATA, bave worked out what they call a "pass through mechanism." a formula whereby the widely different sizes and varying natures of the alrlines concerned-well over 100 in all -and the different attitudes of their governments, it is the best the airlines cao acbieve. Just how well It will work

If you want to find out more reasons why Cossor

people feel optimistic for the eighties, send for a free copy

Billions of Revenue Passenger-Miles



FUEL PRICE FORECAST

Source: CAB Data-U.S. Trunks All Servicea (1979) Data. 1980-85 forecast by Lockbeed Marketing.

than nothing in a period of mentally-conscious age. The thing to cut down the \$1bn loss they are currently con-

sistently incurring. improvement At the same time, however, the airlines are obliged to For the continue their fleet replacement programme, and also to buy new jets to meet the longer term improvement in their situation that many believe will come.

The re-equipment tide bas slackened in recent months as a result of the airlines' economic problems, but orders are still being placed, especially by air-lines in the Third World. This is because many of the existing fleets are ageing, having been In service for upwards of 15 years, and are now becoming fuel - Inefficient in today's climate of soariog fuel costs. while at the same time they

continual rises in fuel costs, new aircraft moving in are and they hope it will do some-likely to be up to 30 per cent hetter in fuel performance than those they replace, with further improvements likely through

BILLION

1988

For the longer-term, to ease the way for the mass travel and air cargo boom that maoy in the industry foresee in the middle to late 1980s, the world's airlines are pressing govern-ments for consumer-orientated approaches to existing government procedures that create hottlenecks and hold-ups at airports and along the routes. The airlines want easier customs and immigration formalities. and a more concerted attack on Including easier over-flying of sensitive areas of the world, so as to speed the flow of pas-sengers and cargo, and also to save fuel.

M.D.

OSSOR TECHNOLOGY OFFERS CERTAIN ADVANTAGES

As we enter the eighties the Jeremiahs are having a whale of a time. Political, military, economic and environmental prognostications all have one thing in commonpessimism. At the risk of sounding complacent, Cossor Electronics see the future quite differently. We have the technology we have the order book and we have a range of sophisticated equipment which gives us every reason to face the future with confidence. And that goes for the people that work for us too.

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We are amongst the world leaders in secondary surveillance radar, the vital tool which gives air traffic controllers information on the height and identity of aircraft. Now we have improved our capability with the introduction of monopulse techniques to overcome many of the problems of signal interference which occur in crowded skies. Already the UK Civil Aviation Authority has ordered 20 monopulse systems from us- and we expect



Left an archait piot on a secondary radar display showing the effects of signal interference. Righs, the difference with Monortuise.

Compass 9000-presenting a clearer, sharper picture

As another step forward in secondary radar technology. we have introduced a software controlled processing and display package to give the operator clearer, more accurate information. Known as the Compass 9000, the system is modular in construction, economical in price, and has already been specified for several major airports in the United Kingdom.

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Our data processing, communications and software expertise is now being applied to the rapidly growing field of computerised telemetry. Particularly suitable for gas and water distribution, our systems will monitor, detect and display information instantaneously, allowing users to take maximum use of their resources and to take swift

remedial action on faults. Already seven public utilities have ordered our systems, and we think that they are the

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Cossor Moderns-ready to eliminate extraneous signals

We are playing a role in the resurgence of HF communications with the introduction of two programmable modems-a 'two-tone', with patented filter techniques to maintain

correct transmission frequencies, and a 'multitone' which can transmit data at the maximum HF speed of 2400 bauds. Both moderns will have many civil and military applications.

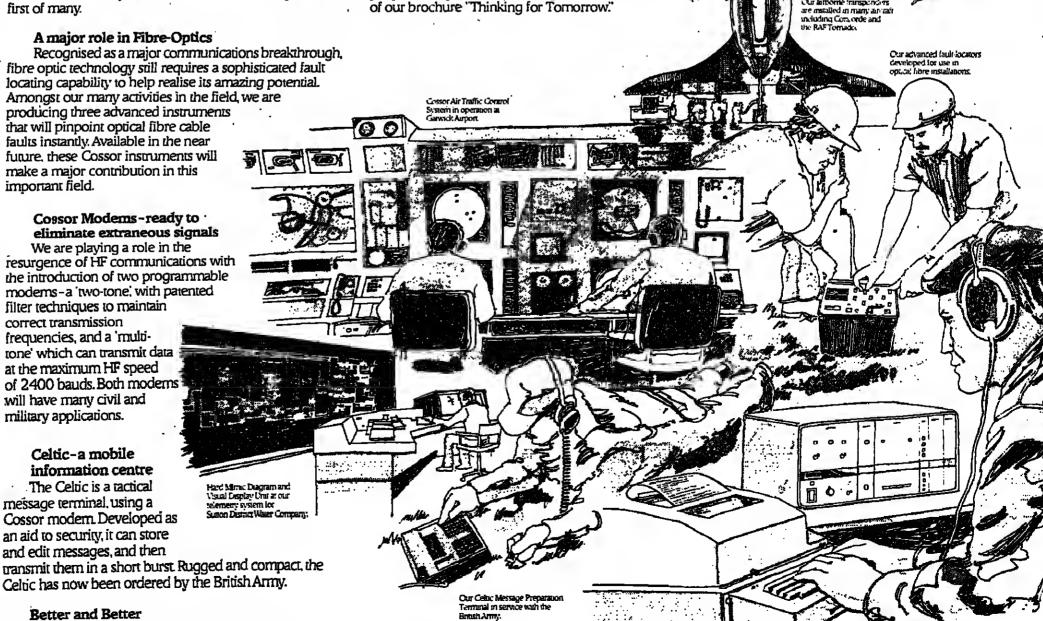
Celtic-a mobile information centre

The Celtic is a tactical message terminal using a Cossor modern. Developed as an aid to security, it can store and edit messages, and then transmit them in a short burst Rugged and compact, the

Better and Better

These are just some of the current developments, and we have not even mentioned our £16 million RAF Precision Approach Radar contract...our airbome interrogators...our microminiature airborne transponder ...our new electronic teleprinter...

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AEROSPACE VI

Airport expansion projects prove confidence in future

gramme of new airport developmeet demand for air transport services into the last years of the century is expected to con-tinue unabated throughout the

This is despite the current decline in the recent bigh growth rates for passenger traffic caused by the growing recession in world trade.

Passenger traffic is cent a year in the immediate future. This compares with the average growth rate of 10 per ceot a year experienced in the mid to late 1970s when cheaper fares and rising incomes opened air travel to large numbers of

new travellers.

Their confidence stems from the belief that the current downturn in demand for air passenger transport services is

temporary.
The industry points out that the last substantial fall in demand for air transport, after the Middle East war of October 1973, when oil prices rose dramatically, was very short-lived. Within a year, passenger traffic numbers had resumed their growth rates.
Similarly, after the most

recent fall in demand, in 1976 to 1977, demand picked up again, after a year of low growth, and -until this latest downturn-had rontioued the steady rate of growth recorded in the late 1960s and 1970s.

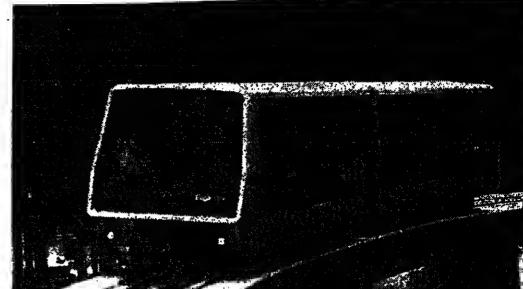
The result of this confidence among the air transport operators is continued commitment to the most substantial programme of airport and related developtransport industry.

Plans now underway call for

the spending of a world total of up to £50bo by the carly 1990s oo new airports, expansion at existing airports and on all the aocilliary equipment essential for the safe and efficient runniog of ao alrport in the late

20th century.

More detailed figures — the latest published by the Inter-



The Westinghouse fully automated light rail system of the type to be installed at London's Gatwick Airport as part of the British Airport Authority's development programme over the next five years. The system will carry passengers from the existing terminal to a new "satellite" building closer to the runary

of proposed projects.

Civil eogineering is the big-gest single component in sirport construction programmes and is expected to cost airport authorities and governments \$12.5bn at 1979 prices. Further spending is expected by the 1990s. The ICAO expects more than half of this expenditure to be carried out in North America.

Europe is the second greatest area for new airport projects and those aimed at expanding existing facilities. Spending in the region on construction alone is expected to run to more than \$2.5bn over the period to 1988.

Africa is also expected to provide work for airport designers, contractors, and equipment suppliers, with total civil engineering spending likely to exceed

\$2bn over the period.

The other substantial area of spending in the alrport sector are expected to involve the spending of almost \$12bn on on air traffic control equipment Europe where an advanced

infrastructure for bandling air transport already exists, albeit at the limits of capacity in some cases, including London's Heathrow Airport, is expected to spend more oo air traffic control systems btan on new civil engineering work for airports. Nevertheless, airport improvemeot and expansion schemes, as at Britain's Gatwick and Heathrow airports, continues with no sign of a chthack.

Ground bandling systems for world airport developments are likely to cost almost \$5bn over the next eight years. North America and Europe dominate the Investment in this area of fork-lifht trucks, conveyors, baggage sorting and bandling equipment and aircraft towing tractorsa nd passenger buses. hTc handling sector includes advanced rapid-transit systems, and world airports, including

Gatwick, are gradualy mnving towards this type of semi- or fuly automated system as an aid to the quick and efficient handling of passengers. The British Airports Authority decided last September to install a Westinghouse rapid transit system at Gatwick to link the existing passenger terminal to a new satellite " building.

Reolacement

This building is designed to eplace the north pier at Gatwick and, when completed in 1982, will handla passengers carried by the unmanned, electrically-propelled vehicles from the main terminals. Other derelopments at Gatwick, now one of the world's fastesi-growing airports, include a plan by Rall to redevelop Victoria Station in London by 1984 to separate air passengers from rail users. The expected continued rise

in the volume of passengers at world airports has led to the large number of schames now under way-as at Gatwick-to ensure that sufficient capacity is available to bandle the aircraft and their loads. In Britain, airports' policy, at.

least to 1984, was defined last December when Mr. John Nott, the Trade Secretary responsible for civil aviation matters, announced his plans for meeting the expected shortfall in capacity at London's two main airports-Gatwick and Heathrow. The current capacity of these two airports, with Staosted, the other major south-east airport controlled by the British Air-

ports Authority, and Luton, controlled by the Incal authority, is 50m passengers a year. The lotal number of passengers who used Stansted, Gatwick, Heathused Stansted, Gatwick, Heath-row and Luton last year was almost exactly 40m passengers.

the BAA to define and apply for the "safeguarding" of an extra 2,500 acres of land.

total of 28.5m passengers with space if this is needed in the

sation last year—show the scale 30m. passengers. The latest figure represented a rise of 7.4 per cent compared with the pre-

> Domestic traffic accounted for the major part of this increase volume, and was up by 14 per cent on the previous year, a rise which was countered in part by the 6 per cent decline in traffic to and from the Middle East over the recent period of intense political unrest.

Low fares

The introduction of low fares on routes between London and the U.S. led to a growth of 11 per cent in the volume of traffic in and out of Heathrow on these. services. The volume of European traffic to and from Heathrow Airport grew at a more modest 5 per cent increase in passenger volume.

involves air traffic rootrol A continuation of growth in developments are continuing in systems. Total world projects passenger volume at even a Europe, North America and in A continuation of growth in more modest rate than last year. Third World nations, One of are expected to involve the spending of almost \$12bn on control equipment, with most of cent a year into the mid-1980s meeting this rising demand it supplied by rountries in —would result in Heathrow now taking shape at the Charles Europe and North America. running out of capacity well de Gaulle Airport. Paris. Again North America domi- before the mid-1980s. Growth. The airport is noted for its nates the business with plans to spend almost \$66n of this total a steady 3 per cent to 4 per is aesthetically pleasing but cent a year into the late 1980s apparently has not marked by and 1990s.

The British Airport Authority's Heathrow were finally approved the Government before Christmas. This terminal, which will also be the last permitted at Heathrow, will raise the airport's capacity to 38m passengers a year from April, 1985, the earliest possible time for the extra capacity to be available, and three years later than originally planned by the

authority. before the terminal romes into operation, the authority last month.

At the other main airports. Gatwick has recently had £100m spent on new facilities, and with passenger volume np sengers, the airport now claims to be the sixth busiest outside the UK in terms of passenger

Gatwick now can handle 16m passengers a year through one terminal building and from one ruoway.

The airports authority has firm plans to build a second terminal raising capacity to 25m passengers a year by the mid-1980s, subject to planning permission. But it has com-mitted itself to handling this subject to volume on the existing single runway, a decision which was sealed in a legal with the local authority which effectively prevents the BAA from building a sarond operational runway at any time in

This additional capacity will lift the total Heathrow and Gatwick airports to passengers a year by the mid-

But the main element of the Government's airports policy statement made last December was the decision to allow the small, currently under-used airport at Stansted to expand from its current capacity of 1m passengers a year to 15m by the late 1980s. Only 400,000 passengers used Stansted in 1979/80.

However, Mr. Nott made it clear that the proposed strategy is one which allows this extra capacity to be developed only as demand develops. He said this approach avoided tha massive expenditure implications of developing a green field or coastal site.

The current plan is for a new. terminal to be built at Stansted to bandle the expected increase io traffic flow. This terminal will be fed by the existing runway. However, the Government bas given permission for Heathrow is the largest air enough for a possible serond port and 10 1979-80 handled a nunway, and extra ferminal

national Civil Aviation Organi- facilities capable of handling 1990s and heyond, possibly up to a capacity of 50m passengers a year by the year 2005—the current combined capacity of Heathrow, Gatwick, Litton and Stansted.

With the proposed first new late 1980s the three London airports would be able to handle .78m passengers a year or 8tm with Luton airport. This compares with the latest forecasts, which take account of the uncertainty about future oil prices and world economic growth, and point to a demand. of between 69m and 81m passengers a year, by the 1ste 1980s. At this maximum demand, passenger capacity will match combined capacity in a

At the time Britain is formulating its policies to cope with demand for air travel facilities.

apparently has not worked as functional building. Problems of congestion associated with plans for a fourth terminal at the detailed design of the building bave led to a completely different approach in the design of the airport's second terminal

Instead of a circular terminal the Aeroport de Paris planners decided on three more conventional terminal buildings, with the first expected to open next year, and the others by 1983 F they are needed. They will in total, increase the capacity of The delay will result in the airport by 15m passengers severe overloading at Heath- at a total cost, with associated aircraft apron facilities and roads, of almost £160m.

Another area of rapid airport development is the Middle East. A new international airport is to become operational soon a Jeddah, Saudi Arabia, and two by 11 per cent to 8.8m pas- other large airports are under construction at Riyadh and at Dhahran.

Further plans Plans for a new airport also

exist in Hong Kong It is desperately needed to replace the facilities at Kai Tak, which is expected to reach saturation point by the mid-1980s. Preliminary studies are already being carried out with a view to building a new airport at Chep Lap Kok on Eantau Island west of Kowloon and Hong Kong Island. A final decision on the project is expected to be taken by 1982, so that work on the £500m airport can proceed

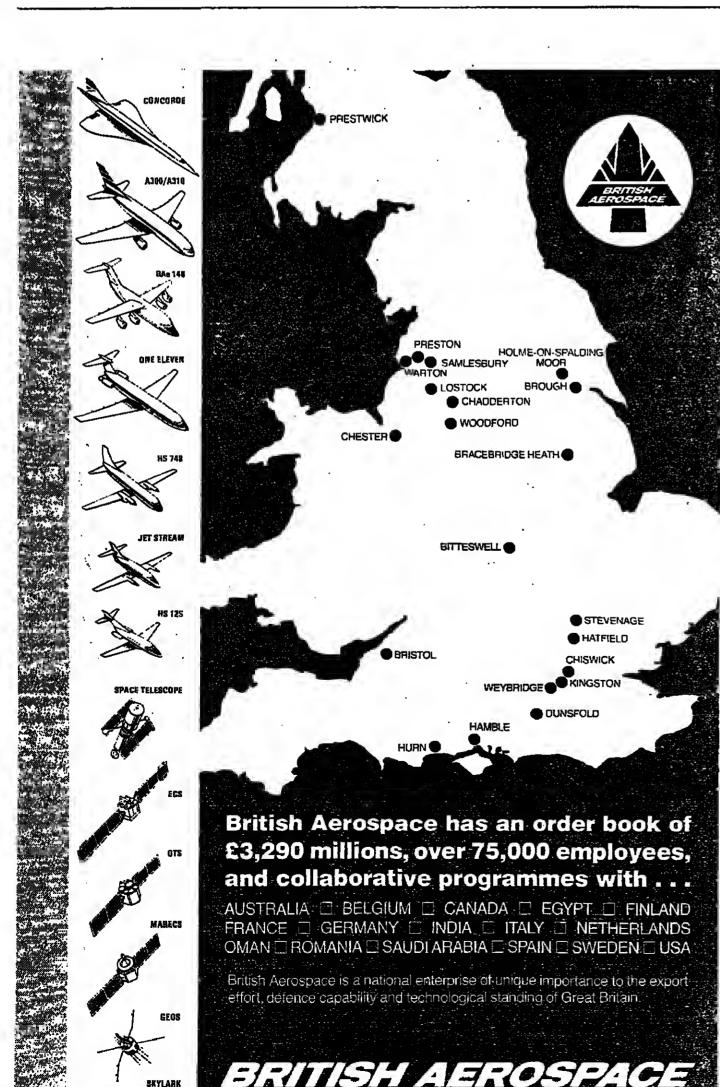
At Singapore, the first phase of the £500m new airport at Changi, replacing the existing airport at Pays Lebar is now under development, and is due to become operational next year, with further expansion planned through the 1980s and beyond as demand dictates. This new airport, much of it on reclaimed land, is to be linked to the city by a new arterial highway. Changi will further enhance Singapore's rola as the air transport "hub" of Sonth-

East Asia. In the U.S. one of the most spectacular developments is at Atlanta, Georgia, where the \$750m Hartsfield Atlanta International Airport is to open in mid-September.

The terminal is claimed to be the largest in the world and will be capable of handling 55m passengers a year, and eventually up to 75m passengers.

Atlanta International already the second largest airport in the world and last year it handled 41.7m passengers Only Chicago's O'Hare airpor with its throughput last year of 47.8m waa bigger in terms of passengers handled. Heathrow has now dropped to fourth place in the world league with a 1979-80 throughout of 28.7m

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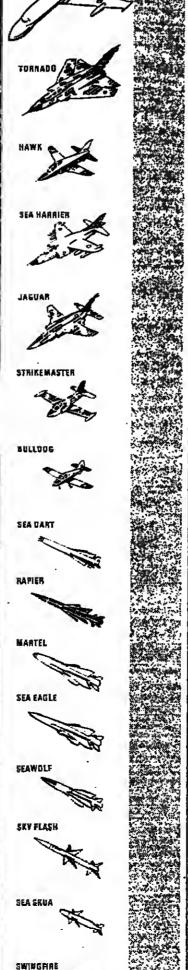
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Today, Consumer and Commercial Products

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Labour-saving equipment likely to dominate market

WORLD DEMAND for aerospace equipment and associated —perhaps at half the 10 per aircraft and expects to supply McDonnell Douglas AVSB, the range of comognies involved in systems is expected to call for cent per annum rate experiat least 200 sets over the period latest version of the British the specialised design and £60bn hetween now and the late

New updated equipment and systems requiring fewer man demand for civil air passenger and have been apecified for the hours to operate and maintain transport services would almost new British Aerospace 146 air advanced products. are likely to dominate purchases by aircraft manufacturers, air- space equipment makers just as to make its first flight next port authorities and airport much as the airframe and engine

The £60bn investment figure includes on-hoard equipment for civil aircraft, air traffic control systems and the whole range of airport and aircraft ground equipment essential to maintain the safety and comfort of passengers and crew and the efficient operation of contemsubstantial but less easy to

quantify.
On the civil side, by far the largest sector in the aerospace for easy reading by flight crews equipment field is that covering and to be compatible with the needed for operations on board the aircraft.

A third of cost

This equipment is estimated to account for approximately a third of the total cost of new civil aircraft—more in the case of new military aircraft where the demands of advanced radars. communications equipment, missile controls and airborne counter - measures raise substantially the basic costs of airframe and engine.

Of the total cost of new air-line transport aircraft, their maintenance and parts and new general aviation aircraft, maintenance and parts estimated at over \$210bn at last year's prices, according to figures published by the International Civil Avia-Organisation (ICAO), equipment and parts account for \$70bn, or, if updated to current prices, about £42bn of the total civil aircraft, maintenance and parts spending by the late

Other ICAO figures showed that air traffic control equipment and systems are likely to account for over £7bn over the period up to 1988. Spending on airport ground handling equipment, for the same period, is expected to account for over place. £3hn of the total spending on aerospace equipment

Crowth in all these sectors is space

-than was expected even as phase. recently as last year.

certainly hurt the world's aeroground operations handling manufacturers, perhaps more companies. growing importance of the equipment sactor as a generator of employment and new tech-

nology. Typical of the type of new and advanced equipment now heing spacified for the latest jet airlinars ara the digital elec-tronic instruments being deporary air transport systems signed by the aerospace instrument sector for use in craft equipment is even more Boeing's new 757 twin-jet passenger airliner which is to join British Airways fleet in 1983.

The instruments are designed the equipment and spare parts new generation of on-hoard computers.

These lightweight computers. made possible by the advances in miniaturisation associated with recent developments in micro-electronics, have a vital role in belping to provide flight crews with a high degree of "thrust managament." This is the current phrase used by aircraft manufacturers to describe control of aircraft fuel at a time when its cost is putting a severe strain on commercial airline operations.
Related to fuel-efficient opera-

tion is the need for accurate guidance of aircraft. The new Boeing 757 will have a guidance system provided by a navigation and aircraft attitude system hased on new laser gyroscopes.

The digital flight manage-ment computer will enable the flight crew to co-ordinate the autopllot and automatic throttle controlling engine fuel consumption, so that climb, cruise and descent can all be carried out at maximum fuel efficiency. Boeing helieves that these developments will belp reduce. largely through higher fuel efficiencies, the operating costs of the 757 airliner by about 40 per cent compared with the existing airliners it is designed to re-

The 757 project has provided other work for British aero-

Dunlop carbon hrakes are liner. The BAe 146 is expected year and already the first set of wings from Avco Aerostruc-tures in the U.S. has been delivered to the BAe Hatfield fac-

craft.

But the design and manufac-A prolonged downturn in fitted to all Concorde aircraft ture of aerospace equipment is

Airport equipment for ground

cient day-to-day operations of and tractors; cargo hoists, transcivil airlines. The f3hn world porters and catering trucks. livered to the BAe Hatfield factory for joining to the fuselage.

Dunlop has also had success in the military aerospace equipment expected by 1988 has make fuel storage and distribution in the military aerospace equipment expected by 1988 has make fuel storage and distribution of the continued existence and units, bydraulic platforms, tollet ment field. The company's Avia- prosperity of the British Air- trucks, vehicles for washing airtion Division at Coventry has port Equipment Group, the craft, water trucks and com-been awarded its first major Leeds hased group of UK manu- plete hangers. U.S. contract. The company is facturers which is to hold its to supply the integrated hrake fourth annual conference in the full-scale London early next month.

The group represents a wida Show and Exhibition, with the total civil investment of almost enced in the mid to late 1970s of the aircraft's development Harrier vertical take-off air manufacture of ground support equipment for aircraft handling and servicing.

Underlined

Members make alr-conditioning units, tow tugs, air-stairs, handling operations provides air-starters. haggage check-in essential machinery for the effi-

> companies will be underlined at it would be a "useful marketthis year's Farnhorough Air ing tool."

Airport Equipment Catalogue.

This hrings together many of the products of the airport equipment suppliers with the objective of winning a greater share of world airport equipment contracts.

arose out of the "Design and Export " report three years ago produced by the Civil Engineering Economic Development Committee, part of the Government's National Economic Development Office. The catalogue ia also sup-

The idea for the catalogue

ported by the British Airports Authority, the Civil Aviation plete hangers. Authority and the British Over-The activities of many of the seas Trade Board, which said

distributed world-wide and

Also at the heart of the zerospace equipment business and on display at Farnhorough will he Fairey Hydraulics, part of the Fairey Holdings Group of companies, recently the subject of a major change of ownership. Fairey was owned hy the Government's National Enterprise Board until earlier this summer when the Board accepted a cash offer of £22m from the Royal Doulton Group for the whole of Fairey's issued

share capital. Fairey Hydraulics plans to

Show and Exhibition, with the Up to 500 companies in show its wide-ranging and grow-publication of the first British Britain making airport equip- ing activities in aircraft flight ment are potential supporters control, landing gear, filters and of the catalogue, which will he ground support equipment. The distributed world wide and company is pre-eminent for its free-of-charge to people con-nected with airport decision-manufacture of primary flying control actuators for military and civil aircraft. Fairey flight cootrol actuators have been supplied for the Anglo-German-Italian Tornado aircraft.

Hydraulically actuated rudder and spoiler controls from Fairey have also heen specified for Brilish Aerospace's 146 feeder airliner.

Continued demand advanced aerospace equipment for use on aircraft has created subsidiary market for test equipment worth millions of pounds a year.

Lynton McLain

Intense competition in electronics

AIRCRAFT DESIGNERS, airline passengers, and military
One of the greatest success still gain essectial instrument
planners have all benefited stories so far has come from information without the need line passengers, and military planners have all benefited enormously from the advances in electronics that have characterised the aerospace equipment sector since the first working radars were horn amid the tensions of World War II.

The unparalleled advantages heralded by the potential for greatly enhanced miniaturisa-tion and reliability provided by electronic solutions to technical problems have also created one of the most intensely competi-tive fields over the whole aerosprce spectrum.

The number of companies involved in designing and marufacturing "avionics" equipment - airhorne electronics electronics-based equipment for ground operations has mushroomed in recent years. The component sector, providing the vital silicon circuitschips " — and other more mundane components such as electrical connectors, bas also increased, with companies prollferating in a reflection of the growth pattern of the electrovics industry as a whole. Force.

British companies have not The contract involves an been slow to take advantage of initial head-up display order for

innovation and design. Most of manufac- those involved have been no less of course linked with the threes including Dunlop. The successful than other larger about \$90m. has be fortunes of the air transport company has developed low corporations, in the U.S. for Pilots flying aircraft equipped graphics industry and passenger volume weight tyres for the main and example, in winning new hust- with head-up displays are able decade.

Avionics, the GEC-Marconi Electronics group com-

paoy hased at Rochester, Kent. The company has supplied more than 1,500 "bead-up dis-" units for the cockpits of the U.S. Navy's A-7E and A-7D Corsair jet fighters since 1988. It also supplies the night attack version of the "head-up display" for the A-7E Corsairs, the only system of its kind in aquadron service anywhere in the world.

Novel technology

The novel "head-up display" technology uses "diffractive optics"—light hending techniques—to combine the pllot's view of the scene ahead with symbolic data describing the

ay craft's performance. Earlier this month the contpany announced a new U.S. contract-potentially worth over \$100m-for the development of a new-technology head-up display system for the U.S. Air

native skills in engineering development and prototype manufacture worth \$13m. with production options totalling

to take expensively trained eyes off the sky or ground to look

down at the instruments. The latest contract is to provide devlopment information on head-up displays which will form part of the U.S. Air Force's LANTIRN programme. Marconi Avionics has already started work on the development work for the equipment destined for the U.S. Ceneral Dynamics F-16 fighter aircraft - already on order in very large numbers for European air forces-and the Fairchild A-10 close support air-

LANTIRN is a low-altitude infra-red night vision system for aircraft, which will enable aircraft to attack in day or night with equal effectiveness,

The proposal is for the new Marconi Avionics bead-up display to project the image of the night scene, with instrument symbols, ahead of the pilot. The aircraft programme. advanced technique involves the The contract involves an generated by laser beams.

The new display system was the biggest capacity airborne developed to partnership with data processing system ever to the Marconi Research Laboratories of Great Baddow which Royal Air Force. has been involved in bolo-

cises its production options, Marconi Avionics will share the \$90m production work with two European partners in the current F-16 head-up display programme-Kongsherg Vapen-fahrikk of Norway and Oldeft

By the end of this year, British companies manufacturing instruments for aircraft and for ground station use and those making airhorne radio, navigation and radar aids are expected to have exported a record total of almost £100m of goods.

of the Netherlands.

In the first six months of this year, according to the Society of British Aerospace Companies, the instrument makers exported £38.8m of equipment for air-craft and for use at airports. The total exports of airborne radio, navigation and radar alds came to £9.1m.

Advanced airborne radar is at the heart of yet another Marconi Avionics success story, the Airborne Early Warning Nimrod

The Nimrod aircraft will carry radar in the nose and tail and will process signals using be developed for use by the

Other developments to be graphics research for over a shown at Farnhorough, loclude the Marconi Space and Defence equipment has had a profound

equipment for airports. This converts standard telex reports of weather conditions at UK and some European airports into a computer controlled and clearly spoken English voice. The equipment is now installed at London's Heathrow

Prime contractor

This company is also prime contractor to the Ministry of Defence for the £950m Sting Ray sea and air-launched torpedo contract.

Avioolcs equipment is also now being specified for space programmes. Ferranti's Inertial stems Department based at Edinburgh announced last month its third contract to Edinhurgh supply equipment for the Ariane rocket space programme. Arlanespace is a new company created by the major Europeao aerospace companies to take over the management and marketing of the Arlane space rocket from the European Space

Ferranti's latest involvement is a contract for over £1m from Arlanespace for a further six inertial measurement systems for the rocket programme. Elsewherc, in the conventional aircraft field, avionics

operational capability.
In some cases the advances in

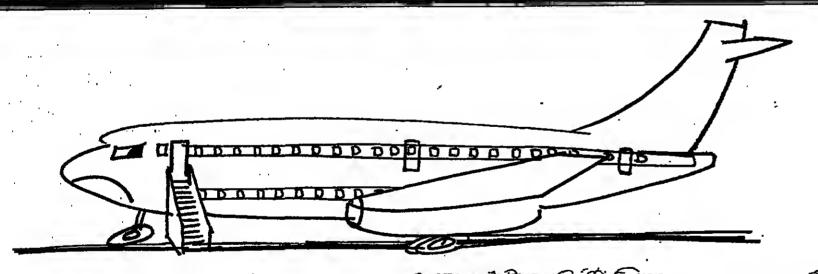
electronics have been so great and the henefits so cost-effective that aircraft designers have heen able substantially to upgrade the performance of existing aircraft without major redesigning of the airframes.

The performance of the European A300 Airbus has also heen improved witr the introduction of improved all-weather landing aids. The airliner has heen tested successfully with the windshield guidance display' WGD 2. The system, designed for Airhus Industrie by SFENA (France) in conjunction with Bodenseewerke (West Ger-many) and Smiths Industries (UK), provides the pilot with information about ground taxiog under poor visibility. It is already in operation on A300 aircraft operated by the French Air Inter airline.

The new equipment also expands the field of vision of the pilot. provides improved symbols of aircraft performance data and eoables the A300 Alrhus to approach airfields in poor visibility, including those not equipped with instrument landing systems — precision approach systems installed at systems - precision many airports.

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Manufacturers confident of long-term rise in orders

strongly for the past two years early 1990s. slackened in the first half of While som financial problems for many airlinas, demand for new airliners is expected to pick up in the longer term.

Indeed, it is only in the major iodustrial countries of the West, and especially in the U.S. and Western Europe, that the slackening of the inflow of new orders has been policieable. In orders has been noticeable. In the developing countries of the Third World demand for airliners of all kinds has been substantial and sustained during the first half of this year. As a result, although the 1980

total of new orders booked by the world's major manufacturers is not likely to reach the levels of ahout 1.000 aircraft or so reached in each of the past two years, it is nonetheless likely to be substantial, and all the aircraft builders are confident that in 1981 the volume of

ordering will pick up again.
This belief is based on the fact that, whether they can afford it or not, most of the world's major airlines are now virtually obliged to replace most of their existing ageing fleets as soon as possible.

This is due in turn to the fact that soaring fuel costs are making many existing types of jet airliners uneconomic-such as Boeing 707s, Douglas DC-8s, early models of the Boeing 727 and 737. Douglas DC-9. British Aerospace Trident and One-Eleven, many of which bave been in service for 15 years or

Too noisy

At the same time many of these older jets are becoming unaccentably noisy lo an increasingly environment-conscious age, with more and more anti-noise legislation directed against civil aviation.

The major world airliner short-range category, about manufacturers estimates of \$42bn, or 1.310 aircraft, in the future demand vary, but these short-to-medium range category. differences are small, and in and about \$40bn, or some 765 broad terms they foresee a aircraft, in the long-range class, demand for somewhere around \$100bn of new aeroplanes—or more than 3,000 airliners of all models already in production, kinds — between now and the with about \$45bn heing spent early 1990s. These nrders will on new models either under be in addition to the 2,500 or so development or planned for the

ALTHOUGH THE re-equipment a total inflow of more than 5,500 the present Boeing 737 and the

ability to finance this kind of fleet re-equipment in the light of the airlines' current financial difficulties, it is generally accepted that the recession and the associated difficulties are cyclical in nature, and that when compared with the overall life of an aircraft in service of some 15 years or so, the current trough is not likely to seriously affect the long-term re-equipment situation.

While some of the manufacturers may also trim their production schedules back a little to cope with the dip in orders. in most cases they remain fully committed and are working at maximum pressure to meet the commitments already undertaken. In some cases this means increasing current production rates of aircraft and engines—for example on the Airhus and the Rolls-Royce RB-211 engine—so as to meet contract dates.

Manufacturers' confidence io the longer term future is epitomised by Lockheed California Company, which manufactures the L-1011 TriStar family of three-engined wide-bodied jets. Lockbeed recognises the current economic problems confronting the airlines hut nevertheless believes that world traffic growth will be such during the 1980s that by 1988 the total of revenue passenger-miles (rpms) flown (the yardstick of air transport out-put) will amount in no less than 940bn a year, or nearly twice the 488bn rpms flown in

Translating this expansion into alreraft procurement terms, Lockheed believes there will he a market for about \$99bn of new airliners by about 1989, of which about \$17bn (or some 975 aircraft) will be in the

equipment tide that has been In the sbort-range class the the 1980s will go by default to flowing since early 1978, so that most significant models will be Boeing with its 757.

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tide that has been flowing new aircraft is likely by the McDonnell Douglas DC-9, both of which are being improved While some of the world's for the future. Boeing is dethis year, in the wake of major banking and other instieconomic difficulties in many tutions have recently expressed
the countries and the consequent concern over the airlines'

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Countries and the consequent concern over the concern ov new engines (such as the Rolls-Royce/Japanese RJ-500 or the Franco-U.S. CFM-56 Dash 3), while McDonnell Douglas is aiready offering the DC-9 Super 80 of about 120 seats.

New short-haul jet airliners in this class also under developmeot include the Boeing 757 twin-engined narrow-body transport, while Fokker of Holland is exploring the possibility of developing a new twin-engined F-29 airliner.

The sbort-to-medium range class of airliners is the most crowded arena, for this is where the hulk of the future orders are likely to be placed. Existing aircraft that will serve this mar-ket include the Boeing 727, probably in improved form, togetber with the Airbus Indus-trie A-300 250-seater, and the shorter-range versions of the existing Lockheed Tri-Star and Douglas DC-10.

Newcomers

But many new airliners are also being either developed or proposed for this class of traffic. They include the 200-seat Airbus A-310 and the "semi-wide-bodied" Boeing 767, and most investment of the semi-wide proposed to the s important, a new airliner from McDonnell Douglas, the Advanced Technology Medium Rsnge (ATMR) transport, now to be called the DC-XX.

This will be a twln-engined.

airliner, designed to carry about 178 passengers over distances of up to 2,500 miles, to compete primarily with the Boeing 757 and also to some extent with the Airbus A-310 and Boeing

McDnnnell Dougless has been exploring the market possibili-ties of this alrecaft with the airlines for some time, and is expected to launch the airliner formally some time later this year, when it hopes to be able to announce an order from one several U.S. major domestic airlines which have been showing increasing interest in the

McDonnell Douglas's Interest

tender for this market would he hoth-so that eventually Jumbos an aircraft from Airbus Industrie of Western Europe, which bas been discussing for some time the possibility of building what it calls the SA (for Single Aisle) range; of airliners variously seating between about 130 and 160 passengers.

But so far both Boelng with the 757 and McDonnell Douglas with the ATMR are much further down the development road than Airbus Industrie. The latter company has still not finalised a design, and there would have to be extensive European inter-Governmental would have to be extensive through the early to mid-1980s. European inter-Governmental discussions on financing such a development, as well as detailed the may still he some years industrial negotiations on work-shacing, before any Airbus SA venture could get rolling.

The serious danger now con-fronting Airbus Industrie and the Western European aero-space industry in general is that if McDonnell Douglas does launch the ATMR, that company and Boeing with the 757 could capture a substantial slice of the avallable market before Airbus Industrie could even be in a position to compete.

A decision on an SA series aircraft, therefore, is now a matter of considerable urgency. if Western Europe wishes to remain in the big market for this class of aircraft in the

1980s and beyond.

In the long-range class of airraft—airliners capable of
carrying large loads of more
than 300 passengers, over
distances of 5,000 miles nr more -the market seems likely to be dominated for years to come by the existing "Big Three"—the Boeing 747 Jumbo jet, the McDonnell Douglas DC-10 and the Lockheed TriStar. Although Airbus Industrie

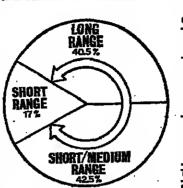
has a pian to build a four-engined long-range 210-seat air-liner, the TA-11, this seems likely to take second place when it comes to allocation of cash and other resources to such other developments as the improved Airbus A-300 Series 600, the stretched 300-350 seater short-to-medium range version of the A-300 Airbus, the TA-9 and the smaller SA series of

Boeing has already announced in developing this aircraft stems from its belief that without the ATMR, the bulk of the short-to-medium range market for aircraft of around 178 seats during further stretches of the zircraft further stretches and zircraft further stretches are stretched upper deck, to seat overall about 469 passengers, and it has longer-term plans for further stretched upper deck, to seat overall about 469 passengers, and it has longer-term plans for further stretches of the zircraft further stretches are supplied to the seat overall about 469 passengers, and it has longer-term plans for further stretches of the zircraft further stretches are supplied to the zircraft further stretches in various ways-either hy ex-tending the upper deck or

lengthening the fuselage, or of up to 700 passengers may emerge, with the 1,000-seater a possibility looming on the distant horizon.

To compete with these plans, both Lockheed and McDonnell Douglas have ideas to stretch the TriStar and DC-10, but these are currently taking second place in hoth manufacturers' plans to the need to improve the performance of existing models of those aircraft, so as to provide customers with the best possible fuel consumption

MARKET FOR WORLD COMMERCIAL JET TRANSPORTS EXPECTED SALES, 1980-89*



Market	Current models			Future models	440
\$17bn 975 aircraft	B-737 DC-9	\$7bn	·	F-29 757	: \$10bn
\$42bn 1,310 aircraft	B-727 A-300 DC-10 L-1011	\$17bn	L-1011-lor DC-10 lor	A310 767 Ig body Ig body ATMR	\$25bn
\$40bn 765 aircraft	B-747 B-747-SP DC-10-30 L-1011-500	\$30bn	L-1011-	stretch 00 YLR	\$70bn
\$99bn	\$54bn		\$45bi	1	12.
	\$17bn 975 aircraft \$42bn 1,310 aircraft \$40bn 765 aircraft	Market models	Market models	Market models	Market models models Market models

'Big three' engine makers compete at all levels

AERO-ENGINE manufacturers the world over are facing their toughest battles ever, as airlines continue to re-equip with new fleets and new technology engines to meet the soaring cost of fucl over the remaining years of this century.

Despite economic difficulties in some countries of the Western world, and recession in the U.S. and Western Europe. the outlook fur aero-engines, as wlth airframes.

buoyant.

Although the inflow of new orders has slowed perceptibly over the first eight months of tbis year, especially in the U.S. in the faca of the recession there, most manufacturers in both airframes and engines believe this to be a temporary situation, and that the outlook for air travel remains strong in the long-term.

In any event, the existing fleets in many airlines worldwide must be renewed, hecause they are ageing and becoming increasingly fuel-thirsty and unacceptably noisy, and as a result the market for both airframes and engines is likely to

continue to be strong.

It is noticeable that the slow-down in orders has mainly occurred in the more developed countries of the West-the U.S. and Western Europe-whereas the demand in the developing countries of the Third World has remained high.

For the long-term the market for civil aero-engines worldwide through the 1980s is estimated at not less than £20bn.
or between a third and half of
the total market of abnut
£43hn (about \$100bn) that is likely to be spent on some 3.00% airliners of all kinds still needed to replace existing ficets, and to meet the anticipated growth of traffic in the middle to late 1980s.

Smallest share

There are three major manufacturers in the world areo-cagine market — Pratt and Whitney of the U.S., the biggest with about 42 per cent of the current civil airliner market; General Electric (GE), also of the U.S., with about 17 per cent; and Britain's Rolls-Royce, the smallest in terms of total market share, with about 15 per cent.

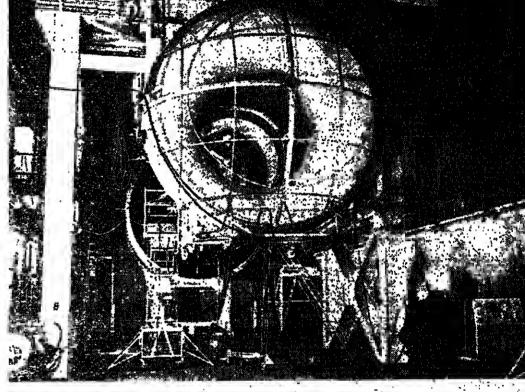
Collectively, these three account for about three-quarters of the total world market, the remainder of sales being covered by the smaller manufacturers such as Snecma and Turbomeca of France, CFM International (jointly owned by Suecma and General Electric). Fiat of Italy, Motorenund-Turhinen Union (MTU) of West Germany, Volvo of Sweden, and others such as Pratt and Whitney of Csnada, and Garrett of the U.S.

The competition between the Belnw this category of air-"Bic Three" occurs at virtu-ally all levels throughout the market, for narrow-hodied airally all levels throughout the market, although there are some noticeable gaps, where one yet involved.
At the top, in the big 400-

plus seat Boeing 747 Jumbo jets, where Rolls-Royce has won a niche with its RB-211-524 engine, the competition is mainly netween General Electric with the CF6-50 series. and Pratt and Whitney with the progress of "big thrust" engines. Various versions of all theses engines are available already at thrusts up to 56.000 lbs. But all three manufacturers have plans to push Royce held the position of solo facturers have plans to push their angines even further, to 58,000 lbs (as in the GE CF6-80 Seriesi, and tthey can even go to 60.000 lbs if oecessary to meet any demand from the airlines for "stretched" versions Eastern Airlines. of the Jumbo jet seating up to 700 passengers or more through

In the other "wide-bodied airliners, Rolis-Royce has so far retained the covated position of sole engine supplier in the Moreover, several major U.S. Lockheed TriStar, with various airlines (United, American, versioos of the RB-211. But Delta and Continental) are Heavy Industries, K this engine is not installed on studying the 757, either as a Heavy Industries and the McDonnell Douglas DC-10. replacement for their ageing bishi Heavy Industries. Where the battle is between 727 fleets or as a complemen-General Electric and Pratt and Whitney, with the CF6-50 and JT-9D series respectively.

Rolls-Royce so far bas not won and Whitney power-plants, it Electric) offering a new version any orders for its engines in seems likely that any of those of the CFM-56 engine, the



Good progress is being made in the development of the Dash 535C version of the Rolls-Royce RB-211 engine for the new Boeing 757 twin-engined jet airliner. One of these engines is seen on the test-bed at Derby. The engine will use up to 40 per cent less fuel per passenger than the current Boeing 727 airliner

for the smaller, twin-engined sales with its Dash 535 engines. airliners, seating about 200 General Electric is developing passengecs and upwards—its new CF6-32 engine for the airliners, seating about 200 passengecs and upwards—notably the Airbus A-310 and the Boeing 767 semi-wide-bodied airliner, for which General Electric is offering the new CF6-80 series while Pratt and Whifney is offering its new
JT-9D-7R4 model of about

44,300 lb thrust and upwards.

This is one of the classic competitive arenas for these two aero-engine manufacturers -- just as it is for the two main airframe builders, Aichus Industrie and Boeing. Many hillions of dollars in orders have yet to be won, for it is expected that several bundred A-310s and 767s will eventually be ordered. These two airliners effectively cover a large slice of the replacement macket among the world's airline fleets.

Rival soon

craft of about 170-180 seats, effectively meeting the require-ment for a replacement for the highly successful Boeing 727, as well as for Bneing 707s and Douglas DC-8s. This market need is currently helng met by the new 178-seat Boeing 757 twin-engined airliner, but this

end of this year.

Until early this year RollsRoyce held the position of sole
engine suppliec for the 757,
with the Dash 535 version of its with the Dash 535 version of its RB-211 engine of 36,500 lb thrust, with "launching" orders placed by British Airways and Eastern Airlines.

William of 16,500 lb thrust, with a new 112-seat version of its bighly successful Model 737 airliner, the Series 300. But in recent months, two

other airlines have placed small orders, Aloba of Hawaii and Transbrasil of Brazil, both specifying General Electric CF& 32C engines of 36.500 lh thrust. tary aircraft for fleets of new prospect of intense competition. 767s which some of them have ordered. Since the 767s use Further down the size scale. either General Electric or Pratt

pean Airous, or in the smallec also want U.S. engines, rather thrust. 200-seat A-310 version, although than Rolls-Royce RB-211-535s.
one version of the RB-211, the Rolls-Royce has always recog-

> 757 in conjunction with Snecma of France, Volvo of Sweden and Alfa Romeo of Italy, and in-tends to have it ready by 1983. But Prstt & Whitney is also

now moving in strongly with its new JT-10D-232 engine, originally designed for 32,000 lb thrust, hut now heing uprated to 36.500 lb to meet the competition from GE with the CF6-32, and from Rolls-Royce with the Dasb 535. The JT-10D is being built by Pratt & Whitney in conjunction with MTU of West Germany (12 per cent) and Fiat of Italy (4 per cent).

new McDonnell Douglas ATMR, so that another classic battle seems likely to occur between the big three engine builders, just as it will be fought between Boeing and McDonnell Douglas on the airframes.

These engines are also all heing offered as potential power-plants foc any new 130-160 seater jet airliners that Airbus Industrie of Western Europe may decide to build, in what it calls the "Single Aisle" or SA series to compete airliners to series to compete airliners. or SA series, to compete with the 757s and ATMRs at the lower end of tha size scale.

Coming further down the scale in aircraft sizes, it is now clear that a major market is opening for aircraft of about 100 to 130 seats, for the middla to late 1980s and beyond. This market is already being served by the new McDonnell Douglas DC-9 Super 80, with the Pratt & Whitney JT-8D-209 engine, but Position

Rolls-Royce stands a good chance of winning a place in this programme, with its new-RJ-500 engine of 20,000 to 22,000 lb thrust, now under development with the three major Japanese aero-engine com-panies, Ishikawajima Harims Heavy Industries, Kawasaki Heavy Industries and Mitsu-

But here, too, there is the with CFM International (the joint company formed by Snecma of France and General

the 250-plus seat A-300 Euro- U.S. operators buying 757s will Dasb 3, of ahout 20,000 lb

Pratt and Whitney is also in this market, with the new Dasb 524G, is on offer, and the nised the fact that it would face JT-8D-209 of 18,500 lb thrust competition here is again severe competition in the 757 and the bigger JT-8D-217 of between the two U.S. giants, from the U.S. engine companies, 20,000 lb (while it even has GE and Pratt and Whitney.

Particularly fierce competition also prevails in the market around one-third of total 757 engines. Pratt and Whitney's position in this area of the overall engine market is very strong, however, for its JT-8D engines in various versions already power the existing 737 and the Boeing 727, and over 11,000 of these engines bave been sold in various versions, covering some 3,600 aircraft, including more than 1,500 727s, over 1,000 DC-9s and over 700 737s.

Vast market

These are not the only competitive arenas in the world civil engine market. Below these types of aircraft and ensmaller category of sircraft, These three engines — CF632, JT-10D and Dash 535 — are also on offer to the airlines in the new McDonnell Days for airlines in 1980s for airlines the new McDonnell Days for airlines in 1980s for aircraft. eight- to 10-seat executive-jets. through the 30-50-seat "commuter liner" range, up to the "baby airbus" hus stop aircraft such as the British Aerospace BAe 146, seating up to 100 pas-

seogers. It is in these markets that the other major aero-engine manu-facturers, outside the big three.

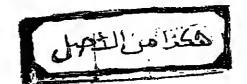
have a major opportunity to win major sales successes.

Already, for example, Avco Lycoming of the U.S. has won the engine contract for the BAe 146 with its ALF 502H jet engine, while Praft & Whitney Already of Connections and the contract of Connections Aircraft of Canada has already won substantial orders for its turbo-propeller engines in the da Havilland Canada Dash 7 50seat feeder-liner, and in the new Dash 8 twin-engined 32-36 seater airliner. General Electric has been chosen to supply the engines for the new 34-passenger commuter airliner now being jointly developed by Saab Scania of Sweden and Fairchild Industries of the U.S. These will be newtechnology fuelefficient 1,500 plus shaft-horse
power turbo-prop engines,
called the GE CT-7, which Saab
and Fairchild say offers 2 5 to
15 per cent better fuel consumption than rival new engine evaluated.

Throughout the world's zeroengine manufacturing industry, tha emphasis is on providing 2 wide new spectrum of powerplants that will be quieter, more fuel-efficient and with minimal pollutant qualities for the new generation of airframes now under development for the mid to late 1980s and beyond.

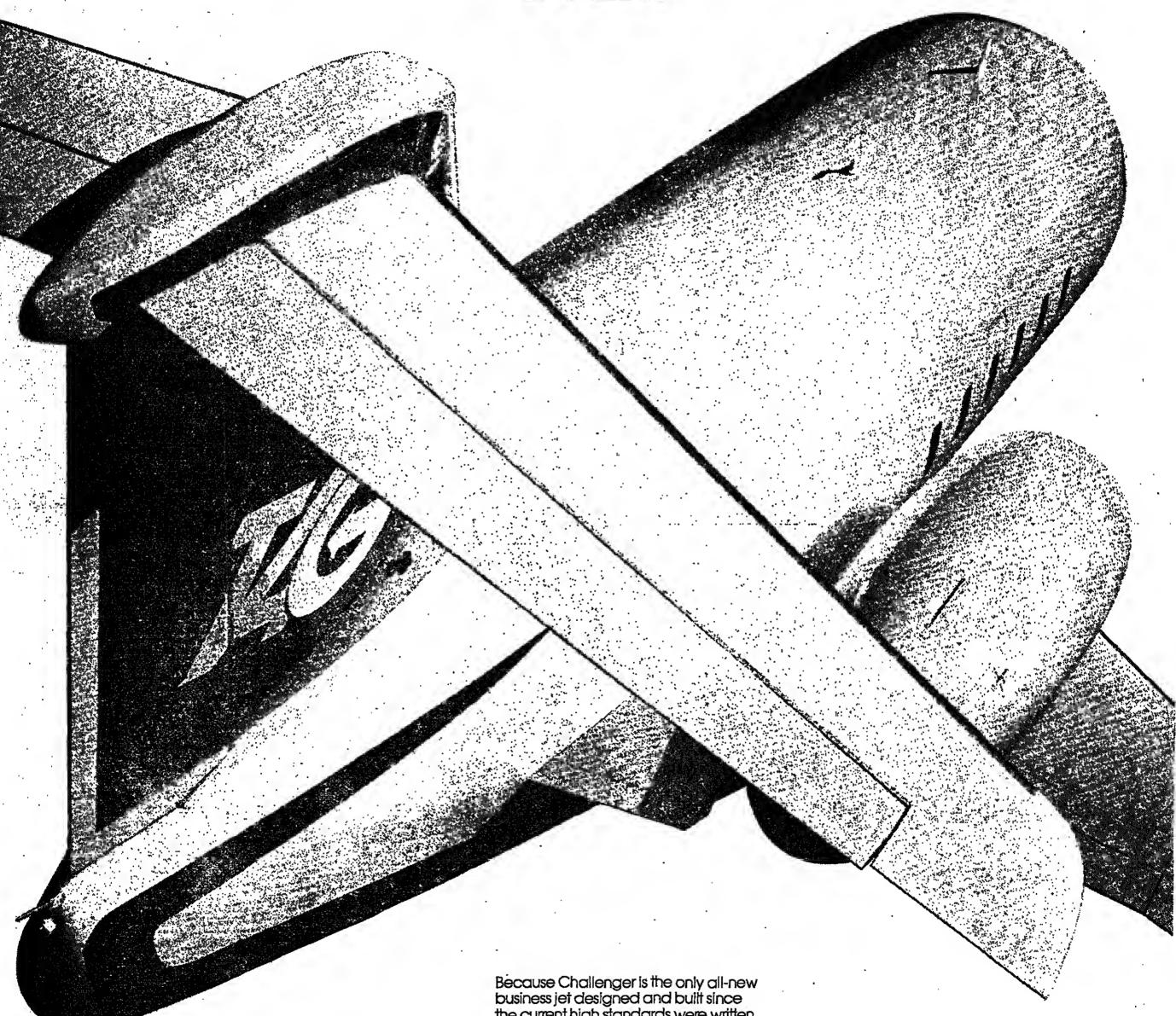


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AEROSPACE X

UNITED STATES

Builders' earnings may slip as recession hits airlines

TO LOOK at the financial results so far this year of Boeing, the world's largest manufacturer of civil aircraft, you would not think the U.S. aircraft industry had a cloud on the horizon. Boeing, which regularly takes between 60 and 75 per cent of the world's air-liner orders, lifted its first half pcofits by 29 per cent to \$295m on sales which were also comfortable 24 per cent

But the impression is some what misleading because Boeing and its two smaller U.S. rivals in the field, Lockheed and McDonnell Douglas, are down the line from the worst mess they have seen in recent years in their key market, that of the U.S. airlines

Collectively, the U.S. carriers lost \$47510 in the first balf of this year (the previous record loss for a whole year was just \$27m). There is scarcely a major carrier left which is still paying a dividend and the industry is heset with rumours of mergers involving the weaker carriers auch as Continental and Branniff International. Traffic down a record 2 per cent in the first half in the U.S., has slumped just as the airlines, freed, by deregulation from many constraints, are locked in what could be mortal combat on prices on plum coutes. So far Boeing has registered

these facts only by announcing that it will reduce its current record levels of airliner output by 12 per cent in 1981, a move not expected to produce any lay-offs in Seattle as the company will be able to employ its existing workforce on the labour-intensive extensions to its product range as the new

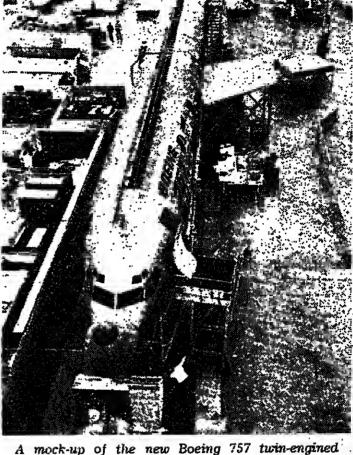
But by 1982 Industry analysts expect to see Boeing's earnings slide as it starts to suffer from the downlurn in ordering rates which is bound to stem from the current recession in the U.S. at the same time as its production costs accelerate in the early stages of the new programmes. Mr. Paul Nishet. aerospace analyst for Bache Halsey Stuart Shields, for example, foresees iodustry output in 1981 15 per cent lower in 1981 than in the current year, to be followed by a further 5 per cent cut in 1982.

Chill breeze

For Boeing this represents a chill breeze rather than a hurricane. In contrast to the 1969 recession, which brought Boeing into a close call with hankruptcy as it struggled with the production launch costs of the 747 Jumbo jet and inefficiencies in current lines, the company has still not there is general confidence that Boeing faces a slight dip in earnings rather than any earnings rather than any description of the air-Boeing faces a slight dip in earnings rather than any serious erosion of its domination of the Industry.

For Lockheed and McDonnell Douglas, the outlook is not so reassuring. So far as civil aviation is concerned. Lockheed is a one product company, still wrestling to bring under control the production costs of the L-1011 TriStar. Lockheed has so far written

off more than \$1hn on the 12year-old programme, having escaped bankruptcy isself a decade ago only with the help of the Government. TriStar write-offs of \$70m in the second quarter were much greater than expected and in spite of brave words from Mr. Roy Anderson, the company chairman, there is real anxiety that



jet airliner seen at Boeing's Renton, near Seattle. factory. The aircraft, to be powered by the Rolls-Royce RB-211 Dash 535 engines, has been ordered by British Airways and Eastern Air Lines of the U.S.

heed will he able to finance a second civil airliner programme, prohably something in the medium range, of twin engine capacity, such as the Boeing 757 and 767, the DC-XX now being contemplated by McDonnell Douglas, and of course the Airbus, which has to wonder whether Lockheed transformed the competitive and/or McDonnell Douglas structure of the industry.

mercial success increases. Lock- work. heed's considerable recent This, as Mr. Nisbet says, \$7.9hn positive trade balance, a running successes in the Middle East would be a shocking develop contribution second only to that the market have enabled it to step ment in either case and it is of U.S. agriculture in 1979. up production of the aircraft from 13 last year to 26 this, but unit costs on the project remain heed's labour and supply

problems.

McDonnell Douglas's woea are of a slightly different character. Along with the airlines which operate the DC-10, travelling public still appears to be howcotting the DC-10 and so not surprisingly McDonnell Douglas is baving trouble finding orders. As the accompany-

the L-1011 may never show ing table shows, the rate of profits.

orders is sharply down, with Boeing 757 and 767 jets start profits.

This raises the important only two placed in the last in 1982. Meanwhile the DC-9 Saper 80

has been suffering certification delays in the U.S. because of alleged problems in testing, a matter which has not helped

the company's image.

These difficulties have led the more pessimistic observers. might not one day judge them-It is ironic that the TriStar's selves to be better off outside, pool of red ink is getting the civil field, enabling them to deeper as the aircraft's comfocus on profitable defence

> one which McDonnell Douglas Advanced Technology Medium a bright future for those com-Range aircraft, now renamed panies able to offer the right the DCAX. Actually the company is still some way from backing the more than \$1hn project, but it is under pressure to do so from airlines unhappy about reduction of competition in the industry. McDonnell

The answer, ultimately, rests heavily on the profitability and scale of the Lockheed and McDonnell Douglas defence programmes. For Lockheed, 57 per cent of whose sales are to the Government, further developments in transport air-craft promise a stable future,

craft promise a stable future, along with the company's heavy involvement in sea launched hallistic missiles.

McDonnell Douglas is facing uncertainty over its F-18 fighter programme. This lighter weight for the suffered sarious in the search of the sear fighter has suffered serious cost overruns, at least in part because of hesitation about its status by the Government. The company has done well in foreign markets, however, winning the Canadian Air Force contest earlier this year with the F-18, and remains an extremely strong defence commany. Once strong defence company. Once DC-10 development costs are covered—say, by 1982—earnings should improve.

Confidence

Although there are many uncertainties in the defence programme there is growing confidence that whatever the out-come of the Presidential elec-tion, real defence expenditure be increased beyond the somewhat cosmetic increases announced by the Carter Administration earlier in the year in response to the Afghan invasion. Given Mr. Reagan in the White House Section 1981 the White House, defence analysts foresee at the very least an end to the tussling between Congress and the Administration over defence spending. The hig long-term decision for the new Administration will be oo whether to fund a new-bomber programme or whether to go ahead with the mobile MX missile system as currently envisaged.

On the space front the industry is hoping that the Space Shuttle will indeed be launched next spring, having already been delayed by two years. The success of that project might push more funds in the direc-tion of NASA, which is the only sector of the industry to bave shown an absolute decline in sales in the last decade.

For the most part the past decade has been one of great progress—and it ended with the industry showing a remarkable

In spite of the worries about bas partly laid to rest with the the American airlines today. recent authorisation of further there is little doubt that the funds for its own twin-engined longer term prospects for medium range aircraft, the growth in air transport promise it. Boeing has conspicuously met that requirement and allied with its recent triumph in win-ning the prime contractorship for the Cruise missile, the Seattle company presents a formidable competitive force lo those who must challenge it in the 1980s.

Ian Hargreaves

CIVIL AIRCRAFT ORDERS AND DELIVERIES

			Boeing				McDonnell	Douglas Lockbeer
707	727	737	747	757	767	Total	DC-9 1	C-10 L-1011
1.	110	76	75	0	51	313	49	34 23_
18	78	66	40	8	17	227	20	6 10
6	136	77	67	0	. 0	286	.39	36 - 14
1 Compa	70 nies.	49	37	0	0	157	12	35 11
	18	1. 110 18 78 6 136	1. 110 76 18 78 66 6 136 77 1 70 49	707 727 737 747 1 110 76 75 18 78 66 40 6 136 77 67 1 70 49 37	707 727 737 747 757 1 110 76 75 0 18 78 66 40 8 6 136 77 67 0 1 70 49 37 0	707 727 737 747 757 767 1 110 76 75 0 51 18 78 66 40 8 17 6 136 77 67 0 0 1 70 49 37 0 0	707 727 737 747 757 767 Total 1 110 76 75 0 51 313 18 78 66 40 8 17 227 6 136 77 67 0 0 286 1 70 49 37 0 0 157	707 727 737 747 757 767 Total DC-9 I 1 110 76 75 0 51 313 49 18 78 66 40 8 17 227 20 6 136 77 67 0 0 286 39 1 70 49 37 0 0 157 12

ITALY

Lack of coherent strategy puts industry in difficult position

THE ABSENCE of a coherent Government strategy for the Italian aerospace industry is becoming steadily more evident—and steadily more serious. A sector which for several years has managed to make impressive progress on several fronts is now aware that without greater State aid and an integrated consistent policy on the part of the Government it faces a much rougher ride in the years to come. The issue is doubly important since aerospace is precisely the sort of high technology exportorientated field where an industrialised nation like Italy should excel if it is to lay should excel if it is should excel if it is to lay the foundations of sound growth in the difficult economic years of the 1980s.

Se far, though, little has been forthcoming. Yet if a coherent plan to rationalise the sectoraecospace powers ef Europe, especially France and the UK, can only increase. Today, despite a 25 per cent increase in total turnover to L1,120hn Aeritalia, the higgest aingle

centre?

At first glance all might seem well with the aector. That 25 per cent growth in turnover represented 8.3 per cent in real terms, against 7 per cent in and pump money into research and development in particular scheduled 10 make its higgest ever advance this year, to between Italy and the leading L185bn (\$220m) from L100bn scheduled to make its biggest in 1979 and L75hn the year before. Meat of the major companies in the field are profit-able, with the exception of

generate \$2hn of business for the Italian manufacturer. Thia is to be set alongside the work it continues to do on the DC-9 and DC-10 aircraft of McDonnell

There are also indications that following Alitalia's purchase of the A-300B European Airbus as part of the State carrier's fleet modernisation programme, Aeritalia is putting out feelers for collaboration on the project with Airbus Indus-

trie. It remains to be seen, however, whether sufficiently attractive terms can be worked out for what would be essentially subcontracting work

All these deals are especially important for Aerisal in that they constitute a shift away from the company's hitherto preponderant commitment to the military exists. the military sector into civillan aerospace work (where the financial rewards are greater and more swirtly delivered).

The current lynchpin of Aeritalia's military work is the Tornado Multi-Role Combat

Aircraft, Jointly under con-struction by Britain, West Ger-many and Italy Italy is due to take up 100 of the aircraft to bolster the currently inadequate

holster the currently inadequate fighting strength of its Air Force, and the first is due to be delivered in 1981.

Further into the future there is the prospect of the AMX, the all-Italian light fighter and battlefield support aircraft, which will be a joint venture hetween Aeritalia and the Varese based Aermacchi, the country's leading private sector.

CONTINUED ON NEXT PAGE

RUSSIA

A major emphasis on air transport

DISTANCES dramatically inadequate road and rail network and enormous areas of trackless desert, tundra and permafrost ensure that air transport plays a major and expanding role in the Soviet Union. The current five-year plan period, which ends in December, has faced the additional task of huilding new or expanded airports at the five Olympic centres of Moscow, Kiev, Talinn, Minsk and Leningrad.

Thanks to substantial assistance from Western contractors like the West Germans, who huilt Moscow's new Sberemetovo 2 airport, all the new Olympic airports were built on time and many other smaller airfields were either extended or modernised to cope with

steadily growing traffic.
But a series of fatal crashes
and delays in the Introduction of new aircraft types bave caused growing problems. Over the past year all four of the Soviet Union's main civil aircraft bave been involved in fatal crasbes involving heavy loss of life. A Tu-154 tri-jet crashed shortly after take-off from Alma Ata airport in Khazakstan in July killing all aboard. This followed closely after a similar disaster, also in central Asia, a month earlier when a small Yak-40 crashed.

These crasbes were preceded in March by the loss of a Polish Airlines II-82, which stalled on approach to Warsaw airport, and the loss of two Tu-134 jetliners which crashed in mid-air over the Ukraine in August last year, killing all 173 people

As if this were not enough the Tu-144 superaonic aircraft now appears to have been withdrawn indefinitely without ever baving entered full commercial

Like the Anglo-French Concorde, the Tu-144 was conceived as a high-prestige product which would act as a living demonstrstion of Soviet aeronautical prowess. In fact it has turned out an even greater white elephant than the Concorde. The Tupolev design bureau has not been able to overcome the engine problems, fuel-distribution, and structural defects which have dogged its progress for over a decade.

Deprived of its expected flag-ship, the State airline Aeroflot pinned its hopes on the new generation of aircraft emerging from Soviet factories.

Of these the most important are the H-86 airbus, the H-76 heavy transport and the Yak-42 medium-range feeder jet. Large numbers of these modern jet aircraft are scheduled for production over the next decade to supplement and eventually succeed the present work-borses of the Aeroflot fleet—the II-62 (virtually a pirated version of have been directed towards the British VC-10) and the developing a new medium-sized, Tupolev 154 and 134. Together fuel-efficient engine for the new these relatively new aircraft, Yak-42, the 120-seat replace introduced over the past decade, ment for the tough little Yak-40. carry around 60 per cent of the

The failure of the airbus and the Yak-42 to appear in time for ioclusion in regular flight schedules covering the Olympic Games bas been a major blow. The airbus has the theoretical capacity of around 400 passengers with their luggage and cargo. In fact, bowever, the current versions of the alreraft suffer from thirsty but underpowered engines, a major weakness of the Soviet civil aviation

industry.

The airbus appears to bave undergone considerable redesigning since its first conception as a rear-engined aircraft with four engines housed in pairs either side of the tailplane assembly, as in the II-62. Now the engines are slung in pods under the wings. At some atage in the future the airbus might well be re-equipped with more powerful engines. Until tben, bowever, it will remain

underpowered.

The engines are believed by Western experts to develop a thrust of around 28,000 lb compared to the over 50,000 lb delivered hy the engines of comparable Western aircraft such as the European Airbus. The new aircraft is believed to have a maximum range of 3,000 miles and a maximum speed of 600 mph, but is likely to be flown sborter distances at lower speeds in order to economise on fuel and allow heavier loading.

It is already over four years since the first prototype flew in 1976, Full-scale production was scheduled to begin at the Voronezh aircraft complex in Central Russia in January 1977, Problems caused by the late introduction of the airbus have been exacerbated by signs of been exacerbsted by signs of engine problems and fatigue which bave started cropping up in some of the older Il-62 aircraft. These problems emerged dramatically this year following the Polish Il-62 crash at Warsaw airport in March.

crasb pointed to fatigue in the air craft's engines and inspection of II-62 aircraft belonging to Aeroflot and East European airlines revealed similar problems. This has necessitated extensive overbaul and repair work. The diversion of men and resources to solving these problems is believed to have been a factor in the delayed entry into service of the new generation of aircraft.

The absence of rellable, powerful and fuel-efficient civil aviation engines reflects the fact that most of the skills in the industry are engaged in the development of military let, rocket and belicopter engines. Civil alreraft engine development bas bad a lower priority.
But a major effort appears to An export sales drive ls being

engines use less fuel than the specialises in the production of Yak-40 and have achieved over sturdy, tough-duty aircraft 95 pcr cent fuel-burning efficiency. Yak-42 is being offered out of unmetalled provincial in three versions; as a 120-seat airports. passenger aircraft; as s 76-seat passenger and cargo variant or as a convertible with a cargo hatch. The maximum payload is 14,500 kg, with a cruising speed of 820/850 km/bour and s range of 3,000 km.

Limited exports

It remains to be seen whether this new aircraft will find any buyers in the West. So far the Soviet aircraft industry has sold its products mainly to Aeroflot Itself and the airlines of Ita Comecon and Tbird World port record in Westero markets is extremely limited.

Thia ia partly because Soviet aircraft tend to be a full generation behind aircraft develop-ment in the West, partly because of the relatively unsophisticated electronics and partly because of the absence of service and spare parts backsystem outside the Communist bloc.

One exception to this rule has been the Yak-40, of which over

more than 100m psssengers mounted by Aviaexport, the phased out as the Yak-42 pro-flown by Aeroflot every year. Soviet aircraft sales organisa- duction line took over production, for this aircraft. Its tion space in the Saratov plant makers claim that the new south of Moscow. Yakovley

> With this sort of capacity the Yak-40 attracted interest from buyers in Yugoslavia, Italy, West Germany and Canada, as well as among several African and Asian airlines. Total sales to bard currency markets remained small. But the aircraft's potential attracted Western interest, particularly from the U.S.

Rockwell Corporation commissioned a marketing study to sssess its potential and this was then purchased by a Wash-Comecon and Tbird World ington aircraft consultancy allies, including Cuba. Its ex-firm ICX-Avionics. ICX subsequently entered into negotiations with Aviaexport, Licensiotorg and other Soviet trade bodies. These culminated in a complex tripartite agreement last December under which ICX agreed to purchase design and performance dsta, manufacturing technology and hlueprints and production facilities. The deal involved the purchase of nearly 1m documents and over 20,000 tools.

The idea was for ICX to 1,000 units were built during build the airframe using the past decade. Production was Yakovley designs and tools

taken from the Sarstov plant and re-installed in a U.S. factory. This U.S. plant would assemble the Soviet airframe and landing gear, equip it with U.S. avionics and U.S. engines and then market the aircraft world-wide as a rugged and reliable feeder aircraft.

ICX calculates that potential market for such aircraft over the next 20 years could be around 1,800, of which 20 per cent would be in the U.S. itself. Unfortunately, however, signature of agreement last December was followed shortly afterwards by the Soviet invasion of Afghanistan. This effectively halted in its tracks the possible provision of the Federal and State funds needed to start production at the proposed factory site in Wheatfield, New York State. The whole scheme is currently

scheme is currently in abeyance pending improvement in U.S. Soviet relations.

Meanwhile the Soviet aircraft industry is building up considerable expertise in various specialised fields including belicopters. hovercraft and distributions of the second control of t dirigible airships, for which it sees a bright future as supplier of beavy plant and equipment to the major oil, gas and raw material projects in the north and in Siberia which are planned for this decade.

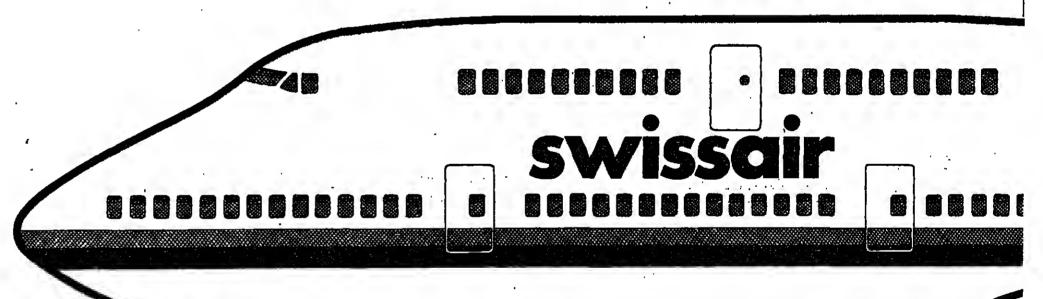
Anthony Robinson



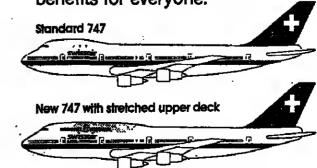
The Ilyushin IL-86 four-engined short-to-medium range wide-bodied transport is now in production at Voronezh for Aeroflot, the Soviet airline. Designed to carry up to about 350 passengers, the IL-86 is widely referred to as the Soviet Union's "Airbus" and it is likely to be of major importance in extending the development of civil aviation inside that vast country

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Lack of strategy

CONTINUED FROM PREVIOUS PAGE

aerospace company. The AMX, fitability is not in doubt is which would replace the ageing Macchi, the partner in the AMX which would replace the ageing Fiat G-91, still in service with the Air Force, would be powered by the Rolls-Royce Spey 807 eogine, to be built under licence by Fiat and Alfa Romeo in Italy. The Turin-based motor group has recently assumed overall responsibility for the conntry's aero-engine industry, IR1/Finmeccanica, Alfa Romeo's IRI/Finmeccanica, Alfa Romeos parent, the central role in the development of Italy's nuclear

Prospects for the AMX, due to make its maiden flight in 1982, are still somewhat condi-tioned by political considera-tions. But its chances of going into full production took a giant stride forward with the news last March that Brazil will parlast March that Brazil will participate in its development in a deal that might generate L330bn of additional sales. This is besides the 200 to 250 of the aircraft required by the Italian Air Force itself.

Meanwhile Aeritalia is also responsible for the G-222 military transport, which has achieved export success, both in the Middle East and Latin America as well as being heavily used by the Italian armed forces.

The other focal point of the public sector's involvement in the aerospsce sector is the Agusta belicopter group—a rare example of profitability in the deficit-ridden world of Italian State enterprise, and 51 per cent owned by the Efim mineralto-armaments conglomerate.
Agusta includes several com-panies: Giovanni Agusta, Sai Marchetti, Elecotteri Meri-dionall and Industria Aero-nautica Meridionale, to name

but four. In 1979 it raised its sales by 42 per cent to L430bn (\$512m), of which four fifths went for export. Some indeed of those exports became bighly cootroversial, when the U.S., via the Bell Helicopter group with which Agusta bas an agreement, hlocked deliveries to Iran of helicopters manufactured by the Italian company—to the great embarrassment of the none the less reported a profit of L6hn for 1979 and bas orders in hand of over

Another company whose pro-

project, but better known for its very successful jet trainers -first the MB-326, of which more than 800 have been sold, and now the praised MB-339 of which the Italian Air Force has ordered 100, and for which export hopes are as strong as they bave proved for the

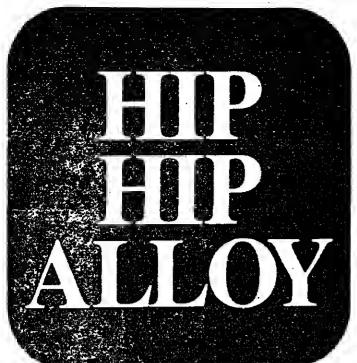
Macchi lodeed is a perfect example of the small company (its sales last year were only L70bn) which bas thrived. The recipe for success is the fami-liar one in Italy-tight financial management and a high rate of self-financing, as much distance as possible between itself and the politicians in Rome, and concentration on a specialised, albeit small, corner of the market. A well-proven system of advance payments from customers has ensured that Macchi's cash-flow bas remained bealthy.

The question is how long this happy state of affairs can go on without a greater degree of Government co-ordination. A possibly alarming sign for the industry last year was the drop —from 48 per cent to 44 per cent-of the share of turnover which was sold abroad. The association manufacturers association warned that this trend was due to the inadequate production capacity of the industry, and the steady decline of its technology compared with that of foreign competitors.

To reverse this trend will unquestionably require massive investment, particularly in the research field, if Italy is to succeed in its hopes of establishing itself as a fully qualified partner in the joint ventures which are the future of the European aerospace industry rather than as a mere sub contractor.

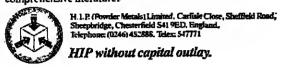
The trouble is that the answers to these problems are political and it is unlikely that the politicians, whose capacity to produce forward-looking industrial policy worthy of Italy's economic weight has so far proved almost non-existent, will measure up to the task. In its Rome Government. Agusta absence the burden, as usual, will fall on the shoulders of the individual companies and

Rupert Cornwell



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WEST GERMANY

Merger policy proved a mixed blessing

world's aircraft industry during the politically fragile days of inter-war rearmament. It was fugal forces within the un-an era which spawned a string comfortable alliance made it of illustrious plane-makers whose names emblazoned their aircraft: Junkers, Messerschmitt, Heinkel, Dornier, Focke-Wulf.

Nowadays the name Junkers is more likely to be found on a domestic bot water beater than on the side of a fighter aircraft. The dismantling of the German aircraft industry after the 1939-45 war put paid to some of tthe early technological advantages and the industry was forced to start more or less from scratch again in the 1950s.

Some of the names have stayed within the industry — Messer-schmidt-Boelkow-Blohm (MBB) for example, is the country's largest aerospace concern with a turnover last year of DM2.6bn (£612m). The Heinkel family for a long time bas bad a small bolding in Vereinigte Flugtechnische Werke (VFW) which, with sales of almost DM1bn, ia second only to MBB in size. And Dornler, whose developmeot of the flying boat in the 1920s and 1930s was revolutionary, is still a determinedly family concern, small but profit-

Change of concept

bere bas been a stendy awareness that Germany vould bave to drastically reahave its aerospace industry if it was to compete profitably against the U.S. aircraft makers, and co-operate with British Aerospace and Aerospatiale.

This recognition entailed a shift away from the concept of family businesses to one of greater size and greater State involvement. Only large units, it was reasoned, could spread the risk and cost satisfactorily. The first significant move came a decade ago wheo VFW merged with Fokker, the Dutch company, but trouble seemed to be built into this transnational marriage almost from tthe beginning. While the Dutch factories worked successfully on the Fokker 27 and (to a lesser degree) the F-28 airliner. VFW in Bremen bad to depend on the VFW-614, the ill-starred shorthaul jet, and on its contribution to the European A-300 Airbus. Gradually the position was reversed — the success of the

WEST GERMANY first emerged Airbus snowballed and VFW as one of the pioneers of the grew more assertive within the partnership. In the final analysis, however, the centriincreasingly clear that VFW's future lay in a merger with MBB rather than the Dutch

This year bas seen the finalisation of the divorce from Fokker and at last a re-marriage between VFW and MBB seems likely before the end of the year. VFW's principal sharebolders-Krupp, the city state of Bremen and United Technologies, the U.S. aviation and electronics group—bave agred to sell VFW to MBB effectively in return for a 10 per cent stake in the new

There are still s number of outstanding issues—but they are negligible compared to the myriad of problems that bave cluttered the path of the merger over the past three years. Four main points still bave to be squared up before the merger can proceed. First, the sbareholders bave to agree on their respective quotas within the 10 per cent bolding. Air industry sources believe the likely make up will be Krupp 3.a per cent. Bremen 3.8 per cent, and United Technologies 2.6 per cent. Krupp, It is understood, will coordinate the three quotas—but that raises the second question: who is to get a seat on the new supervisory board?

One of the delaying factors In the merger negotistions last year was Krupp's insistence on a supervisory board seat and it seems unlikly that they will be prepared to go without one now.

But the board qestion is unlikely to be finally resolved before MBB and VFW come to an agreement on work sbareout. At the moment, there is a crude north-south distinction io the work distribution. MBB's Hamburg plant and VFW in Bremen are heavily committed the Airbus programme igh VFW's subsidiary Erno has been having considerable success as prime European contractor for the development of the U.S. Skylab. Erno is also collaborating with French Industry to build the Ariane launcher and it has a strong line in communications and research satel-

In the south of Germany, MBB's Municb-based headquarters is largely taken up with



The Franco-German Alpha Jet, built by a consortium comprising Avions Marcel Dassault-Breguet and Dornier, is proving to be one of the most successful light combat and training aircraft built on this side of the Atlantic. It is currently the biggest single Franco-German armament programme under way

military contracts. It is, for ernment extremely apprehenexample, the German partner in sive about projects such as the the German-Britisb-Italian consortium building the Tornado multi-role combat aircraft. MBB, even more than VFW, is strongly committed to satellite production and it is a partner the Euromissile consortium which produces the Milan, Hot and Roland weapon systems.

The question is then: bow should these work functions be resbuffled in the new merged concern? The answer at the moment seems to be very little. Wbile VFW could certainly benefit from a few more millrestructuring as soon as pos-

Any streamlining will be watched with eagle eyes by the three state interests involved-Bavaria and Hamburg who between then have a 43 per cent share in MBB and Bremen. All of them are anxious that employment levels will

The fourth related factor is how to evaluate VFW's factories. Three years ago one suspects MBB would have managed to buy VFW's factories at a far lower price than is now being mooted. An independent valuation of the factories-taking makers cannot produce a com-Into account the recent upsurge in Airhus sales and good prospects for further civil work-is regarded by some MBB executives as over-generous to VPCV.

Nonetheless, it is clear that after several years of tough negotiations, the conclusion of the merger is now in sight, much to the relief of the Government which bas been trying to prod the companies along. Chancellor Helmut Schmidt of West that the Alpha is project. In the German air iodustry at present is the Alpha jet programme — is the Alpha jet programme — is the Alpha in the several formations of the French Air Force are to be considered to the Alpha in cellor Helmut Schmidt of West Germany bas twice sent letters verted to the Alpha, which is to the companies concerned and it is understood that Bonn is eager to see the merger finalised before the October elections.

Ligher costs

But bow realistic are Bono's bopes that the new merged con-cern will be sbarply competi-tive on world markets? Together MBB's and VFW's joint sales turnover would he in the order of DM 3bn—not a great deal compared to the U.S. giants. And it is oot at all clear that the two companies' profitability
—DM 44m for MBB last year. DM 9.8m for VFW-would necessarily increase after the merger. Rather, basic costa may well increase in the first years after the merger and profits are unlikely to keep up with sales

Government officials are less pessimistic and believe that in the long run the merger will result in fewer subsidies having to be paid and in generally greater financial independence from Government.

A glance at the current and forthcoming programmes eives only limited support to this view. There is a preponderance of multi-national projects and while, in the case of the Airbus, this can he beneficial by extending the production line and lowering unit costs. it can also turn out to be a rather expen-

The fly-sway price of the Tornado, for example, is now more than DM 35m compared with DM 15m when it was first conceived 10 years ago. The system price is even higher — an estimated DM 67m. This is due partly to improved technological — especially electronic -sophistication achieved during the years of development, but there is little doubt that the high inflation in Britain and Italy has also contributed to an increase in the final costs. Even the Airbus, which has notched up remarkable success - it has a 31 per cent share in the widehody market - is unlikely to reach break even point hefore 1989, according to MBB execu-

tives.
All of this has made the Gnv.

new European tactical fighter. which may be based on the TKF-90, which promises to be an even more expensive pro-position — at a time when the defence budegt is under pressure from soaring fuel costs and from political demand for a stronger fleet and boosted aid to Nato countries such as Portugal and Turkey.

The German Air Force has agreed on some of the basic principles of the combat air-craft with their Britisb and Freoch connterparts, but there tary contracts being steered its is still a long way to go. The way, there are no plans for a major upbeaval and both companies are anxious to settle the buy from the U.S. — but this is considered to be a bad move at a time when the new merged national aerospace concern is trying to establish a foothold.

Options

The other options are to co-operate just with the British, just with the French or with both the French and British togetber. Defence officials have hinted that a trilateral project all, the Tornado costs, also a trilateral project, have not been forgotten. There is, bowever, the fact that the German mercially successful fighter by themselves — some form of io-ternational collaboration will be

Besides the Tornado, the other major military project in the intended mainly for close support tasks. Dornier constructs the fuselage rear section. assembles the wings, tail and fin and some smaller components in the forward fuseloge system. About 175 are due to be delivered to the Luftwaffe by the end of 1981.

ll is slready evident that the European Airbus A-300, its various derivatives, and military contracts will form the bread and hutter of the new merged

concern. But one of the most loteresting growth areas will be in space projects, in which Germany is taking an increasing interest. Erno, apart from its role in the development of the Spacelab, is also collaborating with French industry to build the Ariaoe launcher. The third string to its bow is satellite construction—a potentially very profitable interest shared by MBB and Dornier.

However, the German space industry is at a fledgling stage, illustrated by its precarious dependence on external developmenta. The U.S. Shuttle time-table, for example, bas been constantly postponed, creating a degree of uncertainty about bow dependent German industry should be on projects such as the Spacelab. In addition, the second of four Ariane test launchings ended in a crash; the European Space Agency has already decreed that if any other Ariane test launchings go amiss, then the project will have

to be reconsidered. The new German aerospace concern is entering an uncertain world, where collaborative milltary projects are costing more and more, where profit margins are vulnerable, and where the growth sectors such as space are overly dependent on more established partners. But, German officials and industrialists agree only a merged national (though nationalised) aerospace concern is the only way to keep these factors under control and the only way that Germany is going to become a major force agaio in world alraraft construction.

Roger Boyes



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FRANCE

A rapid increase in export orders

THE MEASURE of how far problems that still remain nr ments for French helicopters France's aerospace industry has are to come. now extend from Brazil to come can be found in some of the country's more neglected kitchens. There one can find tories of Sud-Aviation, the ancestor of today's Aerospatiale, France's largest, State-owned missile and space

Memories of the broken state of the French air industry after the Second World War, when the Americans and British had built up a long lead and French companies were reduced to making domestic appliances, makes the present strength and success of these companies seem

even greater. partners—but also to overlook showing interest in a Franco-some of the pitfalls and U.S. engine, and licensing agree-

The whole industry, public and private, beams with success. Export orders last year totalled refrigerators "from the late more than \$6.5bn, almost as 1950s, equipped with stream much as the sector's overall lined handles and adorned with consolidated turnover during aircraft emblems, with instructihe period. Without an increase tion leaflets explaining that they in the 105,000-strong workforce, were made in one of the fac. salea were up 24 per cent. foreign deliveries were 17 per balance in aerospace was some \$2.6bn in the black.

Having got the last of the ill-fated Concordes off its banda, Aerospatiale last year made its first profit for eight years. Its aircraft division, which had long weighed it down, saw a 62 per cent increase in orders. The Dassault-Breguet group, whose Mirage fighters bave played a crucial role in accuring France a place as the world's biggest optimism about France's ability to confront the U.S. giants in this prestige control last and sales soar this year an increase the world's biggest arms exporter outside the U.S. and the Soviet Union, has seen this prestige control last and the soles soar this year an increase. this prestige sector led the of more than 50 per cent in the French not only to crow about first balf compared with the their own achievements—some—same period last year. The U.S. times at the expense of their . Air Force, of all people, are

The Avions Marcel Dassault-Breguet Mirage 2000 now under development as an

interceptor and air-superiority fighter. Several hundred aircraft may eventually

This rapid expansion means that France is increasingly dependent on foreign markets. Exports now account for about 56 per cent of sales, compared with less than balf in 1975. In the 1980s the proportion will be more like 60 per cent, with a military sector remaining largely export-oriented and the civilian sector looking for new outlets. The future market for the European Alrbus, for instance, or for aero-engines, is overseas. France bas to offer credit conditions and dollar prices according to those set by U.S. manufacturers, at a time when production costs in

Tight margins

On the civilian side, the industry is vulnerable to economic uncertainties and to monetary disorders. In the military sector, competition is increasingly tough and margins are getting tighter.

France are rising comparatively

ducing 1,000 alreraft, is still bilities for smaller or longerrange models are being studied.

The main feature in the now extend from Brazil to civilian aircraft industry is, of course, the triumphant record of Airbus, which the French. who are equal main partners with the West Germans, have an irritating tendency to regard their own Assembled Toulouse, France's air industry capital, Airbus bas broken the jinx attached to that last co-operative project, Concorde.

> Airbus A-300s are already being flown on all five con-tioents by 19 airlines. Another 16 airlines, at the time of writing, had aircraft on order. The total of firm and provisional orders was 417, including 139 for the new generation of sbort-to-medium range A-310s, due to go into service in 1983. Kuwait recently became the first Middle Eastern client to opt for the new twin-engined aircraft to replace its Boeing

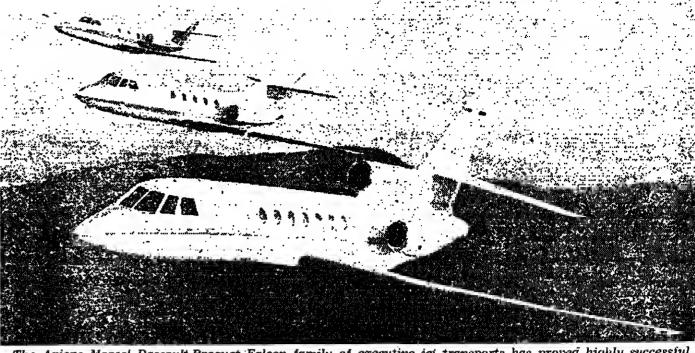
> Calculating that these client airlines will make follow-up orders, Airbus Industrie reckons it already has some 800 aircraft sales "in the bag" and is well on its way to proving itself a profitable venture.

The influx of orders has, however, momentarily shown signs of slowing. Last year brought 11 new clients, the first half of this year only three. Swissair snubbed the European venture for its latest purchases.

In the U.S., Airbus's big breakthrough was Eastern Airlines' order for 25 aircraft, with an option on nine more and the prospect left open of a further 25 aircraft in the 1980s. But so far, Eastern is the only client. It is the same thing that happened with the Caravelle, France's last really commercial airliner, back in the 1960s.

pared with the Seattle giant, slvely for export.

Airbus, with ambitions of pro
The Mirage 2000 bas had small. Its production capacity is limited and its range of aircraft radar system, made by the llmited, although various possi- French Thomson group. Aerospatiale is pooling its be ready until 1985, and the separate project for a smaller Air Force will now he taking aircraft of up to 50 seats with delivery in 1983 of aircraft



The Avions Marcel Dassault-Breguet Falcon family of executive jet transports has proved highly successful over the past few years. The picture shows from front to rear the Series 50 three engined aircraft and the smaller twin-engined Series 20 and Series 10

the Italian company Aeritalia. fitted with a more traditional They bope to bring out an air- system. craft in 1985, competing The (against, among others, projected British and Swedish products) for a promising regional market, particularly in North America.

The French Government has made the first move in bringing the country's two main airframe companies closer together by setting up a bolding company to manage holdings in Aero-spatiale and the State's 21 per cent stake in Dassault-Breguet, acquired along with a blocking vote at the end of 1978. Dassault-Breguet. existing hand-in-hand with the Defence Ministry, bad until then been wholly private.

Teething troubles

Germany's Dornier in Alpha-Jet trainer/ground support aircraft, is pinning its future largely on its new generation of Mirages — the 2000, which is the French Air Force's future strike and interceptor aircraft, and the 4000, a Boeing's position in its home twin-engined version of the market is hardly dented. Com- same fighter, destined exclu-

teething troubles. The most important has to do with the sopbisticated equipment signed for the aircraft will not

The aircraft bas also suffered a sethack in the world market A-310 airbnses. with Australia's opting to buy U.S. fighters, partly to replace its ageing Mirage IIIs. Both the Mirage 2000 and the Anglo-German Tornado were turned down for the deal, now awaiting U.S. Congress approval.

New markets for belicopters, in which Aerospatiale bas a leading position in Europe, are now being exploited more through licensing agreements than by direct exports. Brazil. a joint venture, Helibras, in which the French State company bolds 45 per cent, was inaugurated in April. Puma helicopters are to be assembled in Indonesia, and last month a deal worth around \$100m was signed with China by Aero-Dassault, partner with West spatiale and the engine company Turbomeca. The Chinese are at first to buy 35 to 40 Dauphine belicopters—a model already ordered last year by the U.S. Coast Guard, much to the anger of Bell Helicopter. They will later make both the bodies and the engines at separate plants with an increasing percentage of local parts.

The French State-controlled aero-engine company SNECMA has made a minor breakthrough in the U.S., where a first deal bas been signed to equip some of the USAF's KC 135 tanker aircraft with the CFM-56, an engine developed jointly with General Electric of the U.S.

The deal marked a round in

bad already been beaten in the 10 years. The international Intelbidding to equip Air France's

A bigger order may follow. The CFM-56, which has been used as a replacement on a number of airlines' DC-8s, has been tried by Boeing and has a potentially buge replacement market for 707s. This would be a major step forward for SNECMA, wblcb is anxious to increase its non-military activity.

Strong hopes

In space, France remains the country with the strongest belief in a viable European alternative. The European Ariane lanncber rocket, in wbicb France bas by far the largest share among the 10 partners, finally got off the ground last Christmas Eve after six years of research and two false starts. But the second launching from Kourou, French Guiana, in May was a flop, reminiscent of Ariane's unfortunate predecessor, Europa II, which flew for vo minutes back in 1972. A Paris newspaper rather unfairly printed the headline: "France Launches a Submarine."

The next trial is due in November. At least one of the next two tests has to be successful for the first commercial lannching to go ahead as planned next year. Ariane, on which both Aerospatiale and the Matra missile group are involved on the French side, has a large potential market to compete the Franco-U.S. team's battle for, with some 200 satellites

with Pratt and Whitney, which due to be launched in the next sat organisation recently converted two options into firm orders. But with only one suc-cessful launching behind it, the European group has a long wsy to catch up on the U.S.

Space will take up a large financial cootribution to the industry, already heavily depen-dent on State support.

A report on aerospace in preparation for France's 1981-85 National Plan pleads for Government backing for development of civilian projects to be at least maintained and to be increased in the military sector.

The report, drawn up by a committee headed by M. Rene Ravaud, chairman of SNECMA and head of the French air and space industry group, GIFAS, sets out four major aimsability to keep providing France's essential defence needs, a significant and lasting position in selected areas of the civilian aircraft business, an International role in launchers and satellites, and development of export potential.

It sets the target of a net trade balance for the industry of FFr 80bn (close to \$20hn) during the five-year period. But to reach efficient production levels, it says, France is going to bave to make some strategic choices and reduce the range of products with which it tries to compete on the world market.

David White



Political change gives Saab-Scania a breathing space

(\$48.2m) in public funds to enable Saab-Scania to research Moderate (conservative) politi-and develop the JAS, a light-cian, opened the way. But the

to order the aircraft will he General made in 1982. Meanwhile Saab- February. Scania will he able to keep together its research and development staff and remain a fully fledged manufacturer. capable of designing and huilding its own aircraft.

The May decision represents The May decision represents chase of the American F-16 a noteworthy comeback for the fighter—General Ljung proposed Swedish industry, which appeared last year to have lost the chance of maintaining its could best be met by an aircraft development capability when designed specifically for the Liberal minority govern- Sweden's unique air hase system. ment turned down a plan to Provisionally designated the build a light attack/trainer JAS, aircraft for the air force. "pla resumption of

last September and the return (Parliament) voted SKr 200m to the Defence Ministry of Mr. Most pertinently, General Ljung (\$48.2m) in public funds to Erik Kronmark, a leading pointed out that the relatively enable Saab-Scania to research and develop the JAS; a light-weight multi-purpose aircraft to he used by the Swedish Air policy in favour of developing a new Swedish aircraft came on production could be deferred until 1990s. General Lennart Ljung, in

> Going beyond his brief from the Government, which was to choose from three options-the light attack trainer aircraft, the modernisation of the Air Force's Saah Draken aircraft or the purinstead that the long-term requirements of the Air Force

this would be a new form combining air "platform" combining defence, ground attack Moderate-Centre-Liheral coali- reconnaissance roles but with a mittee stressed that the option in developing the new "plat-

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THE SWEDISH aerospace tion after the non-Socialists' sufficiently short take-off and of buying a foreign aircraft form but at Saab headquarters industry has won a breathing narrow general election victory landing capacity to operate from remained open. With restraints in Linkoping executives are small initial research and development costs could be con-

Bot a murmur

The Government accepted the Supreme Commander's proposal and in May the Riksdag allocated funds with only a murmur from the Social Democrat opposition about the exact amount. The JAS is inlended to replace the Saab Viggen in service with the Air Force in the 1990s. General Ljung put the cost of a JAS programme at SKr 19hn \$4.5ghn) at 1979 prices.

The JAS may never fly. In

continue until 1982 price will be a vital factor.

On the other hand Saah has acquired the opportunity to develop a new major military equal the SKr 200m Government allocation. It is due to submit specifications in September.

a lightweight, 8-10 tonne aircraft made largely of composite materials and much smaller than the Viggen. Secondly, foreign involvement will be greater than in the Viggen. To keep the price down Saab will have to incorporate a lot of developed components and there should be considerable scope for foreign electronics and avionics

approving the research allocation the non-Socialist majority that Saah might co-operate with in the Riksdag defence com- other European manufacturers

rough air strips or highways. on budget spending likely to more eager to develop yet ally Swedish profile.

Despite its lacks of success in finding foreign buyers for the Viggen, Saab nurtures the hope aircraft project. Its own invest- that it might yet develop ment in the project will at least product suited to the defence requirements of customers outside the big military pacts. At the political level considera-Two elements of the JAS are tion for Sweden's neutrality is already evident. First, it will be still a powerful factor in favour of producing a new Swedisb

> The JAS project will also ease the switch towards civil aircraft production for Saab-Scania's aerospaec division. Mr. Sten Gustafsson, managing director, wants to achieve a halance between military and civil production by the end of the 1980s. Last year military products accounted for 83 per cent of the group's aerospace

took a potentially important step towards this objective in January when it signed an agreement with Fairchild Industries of the U.S. to build a new commuter air-craft. Final specifications for this aircraft are scheduled to he released in time for Britain's Farnhorough Air Show.
Designated the Saab-Fairchild

340, it will he a twin turbo-prop 34-seater with General Electric CT-7 engines. The Swedish-American combine— the first European-U.S. partnership covering construction of a complete aircraft—is challenging De Havilland of Canada, Britain's Short Brothers, Embraer of Brazil and Commuter Aircraft Corp., Ohio, in a market which it estimates will be looking for over 2,000 aircraft in the next

10 years. Saab and Fairchild intend to slart huilding two prototypes this autumn. The fuselage will be built at Linkoping, the wings and tail unit in Texas. assembly and testing will take place in Sweden. The target place in Sweden. The target is to deliver the first produc-tion aircraft in 1984. Saah has received a Skr. 350m Government loan to help finance its investment in the commuter

over 2,000 aircraft in the next

Saab-Scania of Sweden and Fairchild Industries of the U.S. are collaborating in the development of a new 34-passenger twin-turbo-prop "commuter airliner, intended to enter service early in 1984. The first flight is expected late in 1982 or early in 1983. The aircraft is designed specifically for short-haul routes of low traffic density, with the U.S. market especially in mind

the Saab-Fairchild 340 was a mannfacture of engines for burner techniques to the Garrett blow to Volvo, the Swedish concivil aircraft. cern with the second largest stake in the aerospace business. lts Flygmotor subsidiary huilds modified Pratt and Whitney engines for the Viggen.

Striving

Volvo had hoped that Saab and Fairchild would choose the Garrett TPE-331-15 turbo-prop engine, in the development of which Flygmotor bought a 15 civil and military use not per cent share earlier this year. funded by the Swedish Govern-At the same time it took a 5.6 ment and non-aerospace proper cent holding in the Garrett ducts, of which hydraulic TFE-731-5 turbo-fan engine.

co-operation agreements with U.S. engine manufacturers are costing Volvo some SKr 800m, including the development of the Garrett Government loans. But, like TFE-731 engine to suit light Saab, Volvo is striving hard to military aircraft carried out The choice of General Elec-balance its military production mostly by Flygmotor, which has tric to supply the engines for with the development and applied its experience of after-

Optimism prevails at Volvo Flygmotor's Trollhattan headquarters, despite the loss of the Saab-Fairchild engine contract. The management believes it will have enough work to maintain its present labour force into the early 1990s and is aiming at an output balanced equally on straight military contracts for the Swedish Air Force, commercial aero engines for both civil and military use not machinery is currently the most

A project on which it rests much bope is the TFE-1042, a

TFE-1042 was 50 fully tested last year and is now being vigorously marketed by Volvo and Garrett. The plan is to build it in three versions, with thrusts varying from 3,500 lb to over 8,000 lb.

Flygmotor also has a tochold in space technology. It bought a small share of the European Ariane project last year and is manufacturing the combination chambers for the first and second stages of the Ariane

All in all, 1980 has proved promising year for the Swedish aerospace industry. Saab-Scania's research and development capacity has been reprieved and the move into commercial aircraft production has got under way.

William Dullförce

ISRAEL

Decision to build new jet crucial for industry

AFTER YEARS of dithering year Israel decided a few months ago fighter which was Israel's first venture Into supersonic jet fighter production. It was a crucial decision for the future of the country's aircraft industry hecause without a new project of this dimension it faced serious contraction as the KFIR became obsolescent after almost a decade of production.

Employing 20,000 directly and providing work for another 5,000 indirectly through sub-contrac-tors, the Government-owned Israel Aircraft Industries (IAI) is one of the country's largest concerns. The effect of any major reduction of this workforce on the national economy undountedly played a role in the decision to produce a new jet

This is not to suggest that the Israeli aerospace industry is a one-product venture—far from IAI offers a range of 350 military and civilian products and services. These include an executive jet, sea-lo-sea missiles, an STOL cargo passenger air-craft as well as electronics, engineering and combined lechnologies divisions. LAI sales in the 1979-80 fiscal

exports accounting for \$323m or to press ahead with its plan to 58 per cent of the total. So far produce a new jet fighter to the company has not released succeed the KFIR combat the budgeted figures for the current year.

> Though the KFIR is the pride of the Isrseli aerospace indus-try, none of these combat-proven aircraft based on the French Mirage fighter has ever been sold abroad. Austria, Taiwan and a number of South American countries were interested, but the Austrians lost interest and the other sales have been vetoed by the U.S. Govern-ment, which supplies the ment, which supplies the General Electric J-79 engine.

Unconfirmed

The company refusea to confirm a recent report from France that it has bid against the Mirage for the supply of jet fighters to Colombia. All the company will say is that it is still involved in "serious on-going negotiations" with a number of countries for the sale of the KFIR.

The political spoke which the Americans placed in the wheel of Kfir sales abroad may also affect the planned new aircraft which will be called the Lavie (Lion) an dis expected to he equipped with the General

Bet Shemesh Engines, which produces 30 per cent of the J-79 engine, is hoping to produce 60 to 70 per cent of the components for the F-404 following U.S. Government approval for coproduction of the engine. The Lavie will be a single-

engined, single-seater, delta-winged fighter-bomber which will replace the Israeli Air Force's aging Skyhawks and Kfirs. At the moment IAI is preparing the paperwork" for the project. It has no dste as yet when the work cycle will start but officials speak of a prototype flying in the mid-Planning and building the

hody is expected to cost \$750m, Mr. Ezer Weizman, the former Defence Minister, said when announcing the decision to go ahead with the project. An additional \$200m will be spent on acquiring rights and preparing the production line for the

Another piece of good news for the alreraft industry is the removal of the U.S. Federal Aviation Authority (FAA) regulation which up to now had prevented the marketing in America of the Arava STOL

passenger and cargo aircraft. The company is expecting to receive FAA licence for the aircraft any day and is negotiating a marketing arrangement

latery

with an Asperican company.

At the moment negotiations are continuing with an American ousinessman who has offered to buy 130 Aravas for feeder line services if the IAI can get the FAA licence. The deal should be worth more than

IAI has aold 70 Aravas to Latin American customers, and has orders for at least a dozen more. The company hopes that the opening up of the U.S. market will prove very fruitful for this work-horse, which can carry 20 passengers or 2.3 tonnes of

The company has already had favourable experience in the U.S., where it has won 20 per cent of the market for its Westwind executive jet series. This aircraft was developed from the Jet Commander, which was purchased from sn American company in the late 1960s. Aircraft deliveries for 1980 will be 42 and there are 51 aircraft on order for the period April 1980-May 1981 The Westwind sells for

CONTINUED ON NEXT PAGE



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AEROSPACE XV



The twin-engined Fokker F-28 Fellowship short-to-medium range jet transport has for the past decade complemented Fokker's other major transport aircraft programme, the F-27 twin-turbo-prop Friendship. Fokker is now planning a new jet airliner programme, the F-29, on which a formal launch commitment is expected soon

HOLLAND

Fokker: a lone David in a world of Goliaths

PROSPECTS FOR the Nether- ful F-27 turnoprop has paid sub- its sector of the market has A-300 so it is currently negotiat-lands' small, but active, zero- stantial dividends into the kept sales to a disappointing ing with Dutch government for markedly over the past 12 months. Finker, the aircraft maker specialising in sbort to medium-haul airliners, has freed itself from its ties with the German VFW group. The continued expansion of inter-national satellite programmes is creating new opening for Dutch companies involved in space technnlogy, though the Government has been criticised for missing commercial opportuni-

Fokker finally reached agreement earlier this year on the.

Sinancial details of its split with

VIV. its partner for the past

11 years. The two companies agreed to dissolve the Dnesseldurf-based holding company through which they had unsuccessfully tried to pool their efforts. This has left Fokker free to develop its own civil aircraft programmes.

Reviewing the breakdown of the alliance, Fokker's new chair-man, Mr. Frans Swarttouw, attributed much of the blame to ships of alreraft manufacturers the divergent interest, of the will become even more two groups. The German com-pany was primarily a military of the airframes of the F-27 alreraft maker while Fokker's and its fet sister aircraft, the strength lay in civil airliners. F-28 are produced by four Where Fnkker's expertise lies different companies while in marketing its aircarft to commercial airlines around the world VFW is mainly a defence contractor working for govern-

Intervention

Government involvement in the aircraft industry meant the two compaines could sometimes not take sensible commercial decisions to shift production from one plant to another—be-cause of official intervention. The Dutch are proud that they have retained an aircraft industry though Fokker is clearly a lone David in a world of Goliaths. The Netherlands s the smallest of the six counwith her own industry capable of designing, making and marketing civil aircraft.

Wth turnover of just under Fi lbn (\$515m) following the split with VFW, Fokker is only just hig enough to survive. A publicly-quoted company with no direct government share holding, it must compete, in Western Europe at least, with larger nationalised groups.

programmes—the hghly success. success. Tough competition in

lands' small, but active, aero- stantial dividends into the space industry have improved Dutch Treasury — but Fokker bas no wish for closer govern-ment links. This means, in the view of Mr. Swarttouw, that present turoover must, be doubled or tripled over the next decade if the company is to remain viable.

> New managers have been hrought in to take Fokker into nitely to go ahead with the air-the 1980s. Mr. Swarttouw, craft, which would come into aged 47, came to the company two years ago from the highlysuccessful container company, European Container Terminus, which he built up in Rotterdam. Mr. Dan Krook, formerly on loan tn Airbus Industrie, has been hronght back to head Fokker's marketing effort while other senior executives have been hired from within the aircraft to share the costs. industry and from outside. Boeing has agre

sion to work with, rather than competition.

Fokker is one of eight concerns involved in making the Airhue

A company the size of Fokker must maintain three main civil aircraft programmes at any one time to guarantee its future, says Mr. Swarttouw. It now has two programmes in full swing, one in an advanced stage of preparation and a fourth under consideration. They are:

The F-27, of which more than 700 have been sold, including 20S made under licence by Fairchild Industries in the U.S.—making this the most nopular turhoprop airliner ever huilt. Fakker hopes to achieve 1,000 sales before the F-27 is retired in 10 to 18 years.

The passing of legislation in the U.S. which allows commnter airlines to fly bieger aircraft has opened un a potentially large new market for the F-27. A recent study by Fokker of the U.S. commuter market

Government backing is given jet counterpart to the F-27 but to support individual arcraft has never achieved the same

160 or so since deliveries started 11 years ago.

The F-29. Fokker is currently holding talks with potential partners in the U.S., Japan and Europe to build this 130-160 seat jet. The Dutch company hopes to decide by the middle of next year wbether to deficraft, which would come into service in 1985.

Many design details have heen agreed in consultation with airlines around the world but further refinements will be announced at the Farohorough Air Show. Fokker needs Dutch Government support to fund this \$800m to \$1hn project but is also seeking foreign partners

Boeing has agreed to supply Mr. Swarttouw has heen the 737 fuselage for the F-29 responsible for Fokker's deci- and talks with Government agencies in Japan as well as the compete with, the American Fuji, Kawasaki and Mitsubishi companies over the building of Rising development costs the wings are also well will mean that ad boc partnerships of aircraft manufacturers heen beld with Airhus Industrie will become even more but the European consortium is important in future. Elements not keen to cooperate with not keen to cooperate with

Competition

Airbus is also in competition with Fokker for the favours of Japanese Industry, having proposed cooperating on its own short-haul airliner.

Fokker therefore seems most likely to team up with the Japanese and either Boeing or Airbus, with the U.S. company apparently the most likely choice. In a break with past practice Fokker aims to carry out assembly of the F-29 ahroad as well as in the Netherlands. This would reduce pro-duction costs and help in breaking into local markets.

An advanced turboprop airliner. Spiralling fuel costs have increased the attractions of turhoprops. Fokker has begun studies of an entirely new aircraft using advanced tech-nology for the Short to medium-

haul market. Apart from its own aircraft programmes Fokker is a partner in the Airbus consortium. despite occasional conflicts of interest. It bas a 6.6 per cent sbare in the highly-successful wide-bodied A-300 and an interest of just over 1 per cent

in the smaller A-310. High European production costs mean that Fokker has been making a

Fokker is happy to stay away from the politicking involved in defence projects. A small company in a country with very limited military aspirations is not well placed to head military programmes, it argues. But i does see both work and profits in taking part in international defence contracts. These are the cream in Fokker's coffee, Mr. Swarttouw says.

Fokker is a member of the multinational consortium which multinational consortium which is building the General Dynamics F-16 fighter. It is producing 617 mid-fuselage sections and wing part sets as well as carrying out the final assembly of 174 aircraft for the Dutch and Norwegian air forces.

The Netherlands is closely involved in the European space effort. Fokker and the Philips electronics group are the main participants but 30 or so smaller companies also supply com-ponents. They are currently engaged in work for the European-manned Spacelab, the Ariang launcher and two communications satellites,

The Dutch also bave their own national space programme. often working with foreign partners. The Astronomical Netherlands Satellite, launched Astronomical Satellite. second satellite, in which the U.S. and Britain also participate. will survey sources of infra-red light in space. The need for further tests on the U.S. part of the programme has led to a 12-month postponement of the launch to August, 1982.

Studies have begun of a third scientific satellite, though this has heen criticised by the Government's advisory council on science policy. In June the council called for a more commercial approach to space research and for greater cooperation within a European framework.

In the council's view, the Dutch Government has missed opportunities presented by the European Space Agency programme to attract projects to the Netberlands.

It wants an expansion of the Dutch space effort but at the same time calls for a close watch on how the F1 100m (\$52m) of Government funds. which go into space research annually, are spent.

Charles Batchelor

Electronics of the future

THOMSON-CSF

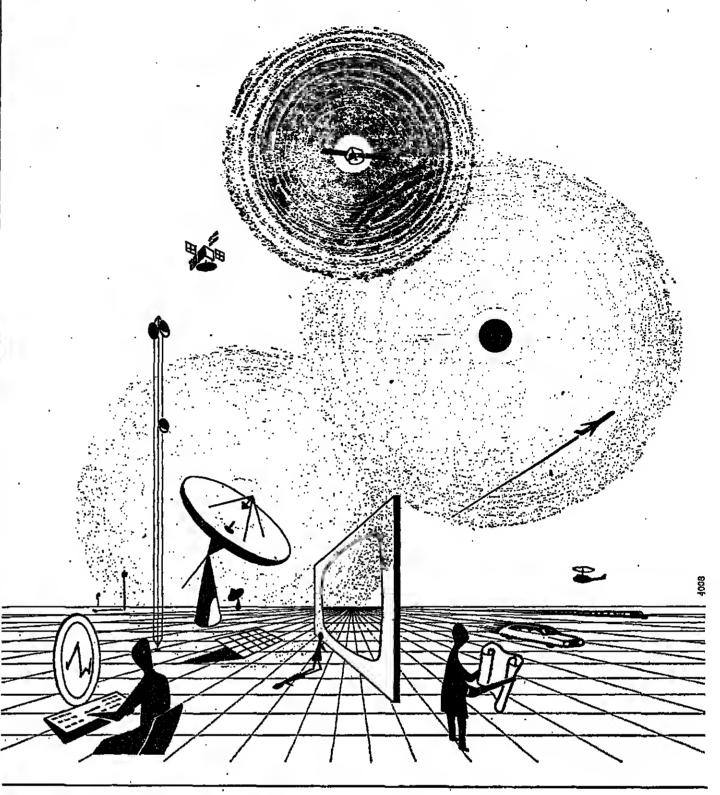
by its efforts in R & D and continuous technological advances, develops today the electronics of the future.

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23, RUE DE COURCELLES / B.F. 25-06 / 75362 PARIS / CEDEX 08 / FRANCE / TEL.: (1) 56312.12 THOMSON-CSF EQUIPMENT AND SYSTEMS LTD HUNTING HOUSE / CENTRAL WAY! NORTH FELTHAM / FELTHAM / MIOOX / GRANDE-BRETAGNE Fairborsogn / August 3157 / September 71.H / Stand of S.96 - H 11 / South Half



Please visit us at Farnborough International '80 South Hall, Stand S 81, Chalet C 25/26. THE BK 117. BULK **TRANSPORTATION** IS ITS SPECIALITY. MPLE MAINTENANCE IS ITS STRENGTH. AMPLE POWER IS ITS MOST STRIKING FEATURE.

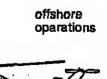
When two intamational industrial leaders invest their immense know-how and enginearing power in a joint project, the result is something very special the BK 117, the helicopter for the Eighties, the offshore, rescue, executive, police and multipurpose helicoptar the market has been waiting for.

Compact external dimensions and exceptionally ample space inside this is the BK 117. Big doors make loading easier. With its two powerful engines, the BK 117 gains altitude quickly. Performance on one engine only maets the most critical operating standards. And the BK 117 reaches a ceiling that puts it in a class by itsalf.

As if that were not enough: the BK 117 is exceptionally easy to maintain, economical to run and available at an unbeatable price for this class of machine. Everything points to it becoming one of the most sought-after helicopters of tha Eighties. Maidenflight: 13 June, 1979.

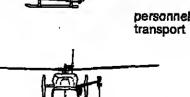






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The Multipurpose Helicopter. The Twin-engined BK 117.

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New 1et CONTINUED FROM PREVIOUS PAGE

hetween \$2.5m and \$4m and is and all weathers up to sea state and refitting of civil and mili-variety of hydraulic ground being produced at a rate of four No. 5. a month. Apart from the U.S., sales have been made in Austrable of IAI products is a including main and tail rotor tralia, West Germany, Switzer retrievable unmanned drone for beads, gearhoxes, clutches, fand, Mexico, Venezuela, observation called the Scout shafts and swash plates. Despite Mexico, Ver Colombia, Ecuador and Mini RVP (remotely piloted Uruguay. There is also a marivehicle). With a maximum time surveillance version availalitude of 10,000 ft and flight

One advantage which Israeli bours, the spy craft carries an assortment of TV and photoover many competitors is that graphic equipment and they can offer combat-tested launched from truck-mounted hardware. One of the most catapults. The company reports successful of these has been the Gabriel sea-to-sea missile. The made but offers no details. Israeli Navy sank 13 Soviet-made missile boats in the 1973 war, and that track record has proved an attractive draw for customers around the world.

IAI is very tight-lipped about its customers for this product, confining itself to saying that the missile "sells well to friendly navies around the world." So well indeed that with sales and nrders of \$350m the Gabriel weapons system, which includes search radar and fire control units, is the company's largest-selling export the Israeli Chariot tank, air

In June last year the Gabriel Mark III was introduced with a range nf 36 km, a 150 kg radar- fire-and-forget weapon.

A recent addition to the altitude of 10,000 ft and flight the company says it has endurance of four and a balf dropped an earlier idea nf some export sales bave been

Integration

Basically the Israeli aerospace industry is concentrating guided on offering integrated defence systems which can take care of clients' needs in the air, on land and at sea.

Arising out of the country's own defence needs, the IAI has diversified its range of products to include a naval patrol boat, tank crew helmets, a tank driver command system used in defence command and control systems, radar and even an antitank weapon called the Picket

The company also has a plant Zactive homing warhead and an The company also has a plant Cairspeed of Mach 0.65. Its in Jerusalem called Mata Helimakers claim it can perform in copters which specialises in the tems, fuel pumps, a dense electronic environment overhaul, maintenance, renewal instruments and allied items. A

tary helicopters. It handles all helicopter dynamic components. the knowledge and skills acquired through this operation. possibly eventually making its

own belicopters. Though the LAI is hte dominant company in the Israeli aerospace field, there are other companies also at work. Rafael, the Defence Ministry's Armament Development Authority. has been marketing its battleproven products for years. These include guided and unweapons, electronic intelligence, speciau computers

and communications ssytems. Four of the largest jet engine manufacturers in the world are among the customers of Iscar Blades, a commercial company produces precision which formed and machined gas turbine and jet engine hlades. Bet Shemesh engines also makes gas turbine engines for industrial and aeronautical applications as well as myriad parts for small engioes and other aircraft components.

TAT Aero Equipment Industries produces fluid control sys- crossed. cockvit

equipment for military and civilian aircraft is produced to client specifications by Mechola Engineering and Manufacturing.

Feeling the pinch

The export drive will be intensified by all these companies as the domestic cuts in the defence budget this year will mean reduced orders from the Israeli defence forces. pinch bas already been felt, with IAI having steadily laid off its foreign workers during the past two years and baving taken on virtually no new local workers in the past year.

The joy felt throughout the industry by the decision to go ahead with the Lavie military aircraft is heing tempered hy fears that the plan could yet be cancelled by a new Government. A new set of politicians might consider it an unwarranted expense to plan from scratch a project designed to provide ahout 200 aircraft for Israeli Air Force and one which might face the same overseas marketing problems as encountered by the Kfir. But the industry is meanwhile keeping its fingers

David Lennon

JAPAN

Joint ventures are the key to future development

THE DOMESTIC Japanese serospace industry is still far bebind its European and U.S. counterparts in both size and technical level. While Japan's Gross National Product (GNP) is now second largest in the free world, aerospace sales in the financial year (FY) 1979 were only same Y300hn (or about \$1.3bn), which is only one-thirtieth of the U.S.'s tntal aernspace business, one-fourth of France's, one-third of Britain's and about one-half

of West Germany's. Even when all Japanese aernspace operations are added done for example with cars. ingether, the scale is still smaller than that of many over- has decided to follow to proseas competitors such as Aero- mute further aerospace developspatiale. Boeing, British Aero- ment is through more jointspace or McDonnell Douglas

dependent nn military demand, special advisnry council sug-Even when YS-11 transport pro- gested Government aupport for duction was at its peak, military international joint-development sales were still some 81 per programmes particularly in the cent of Japan's total sernspace civil field, such as the RJ-500 business. In comparison to Japan's traditionally high dependence on military demand. Canada's is only about 50 per Britain's, America's and France's some 60 per cent each, and West Germany's and Italy's some 70

Low exports

Japan's exports of aerospace products have also been low, accounting for only 6.2 per cent of total production in FY 1979 and an expected 10 per cent in FY 1980. In Canada, on the other hand, exports account for 65 per cent of total aerospace production. in France 50 per cent, Britain 40 per cent, West Germany 30 per cent and in the U.S. for 20 per cent.

Technically speaking, the Japanese aerospace Industry has the capability to develop almost any product hy itself except for supersonic transports or wide-

body airliners.

Japanese companies have become particularly adept at design work, and in this area are almost on a par with Euro- craft such as a high-speed turbopean and U.S. industries, prop or commercial flying boat, ranges valued at some £70m. Japanese production technology. As a prerequisite for such pro- and windtunnels at more than in the aerospace field is, bowever, behind that of other advanced nations, particularly in the areas of quality cost and the development of special

bids against more experienced European and American ones.

promote the growth of the nation's aerospace industry, because of the high added-value and wide technical-spinoff potential to other fields, the so-called "Japan Inc." is far from gaining a leading positiun in the aerospace field as it has The primary course Japan

venture and licensing agreealone.

One major reasnn for such according to the latest governlow production levels is that the Japaoese aircraft industry bas historically been highly national Trade and Industry's fanjet engine project with Rolls-Royce and the planned "YX-X" 100-150 seat civil airliner programme.

The council also urged the government to support the development of high-speed turbo-prop technology and continued studies of various possibilities for new aircraft development. such as a hybrid lighter-than-air craft, a flying-boat commuter-transport system, hydrogenpowered aircraft and ultra-light

In June 1980, the Society of Japanese Aerospace Companies'
"long-term vision" committee defined what it calls the two most important things for the industry's future; I-building the canability to develop new aerospace technology independently: and 2—the successful development and production of various new aircraft.

Committee chairman Hiroshi Nakagawa (professor at Chiba University) explains that Japan must first develop the 100-150 passenger YX-X and then develop some revolutionary airjects, be adds, "Japan needs £100m. Above all, it has over more large-scale research and 2.000 nualified scientists and test facilitles."

The National Aerospace Lah-oratory (NAL) bas been work-The

Nevertheless, Japanese com- experimental "Quiet STOL" re- fence Agency is also developing various ways such as conduct. Companies to set up a special

industry are working hard to military field, the Defence promote the growth of the Agency Technical Research and Development Institute is now researching advanced control concepts with its so-called CCV mndified T-2, which is to undergn flight testing during FYs In the engine field, the FJR

fanjet project was undertaken by industry as a Governmentsponsored programme to increase the nation's technological base in this field, and the De-

panies bave still been successful search aircraft since FY77, and a so-called F-3 light turbofan on a limited but growing num- a Kawasaki C-1 jet transport is for powering its planned MT-X ber of international sub-contract now being modified with USB intermediate trainer replace-(upper-surface-blowing) and ment. Despite these major prouropean and American ones. nther high-lift systems for flight grammes and many significant While Government and testing during FYs 82-83. In the past accomplishments, the Japanese industry is still far behind other nations in terms of aerospace R and D capability.

The Ministry of International Trade and Industry (MITI) is must directly involved with the restructuring of the nation's industry, including the prountinn of the zerospace sector. Fur this purpose, MITI relies nn its advisory councils for the basic expertise in setting guidelines. Based on these recommenda-tinns, MITI provides support in

ing large-scale national projects (like the FJR faniet) and by direct financial support for the development atages of joint-development projects such as the currently uperating YX (Boeing 767) with Boeing and Aeritalia of Italy, the RJ-500 with Rolls-Royce, and the pro-posed YX-X. This so-called "subsidy," however, is actually a Government loan which must

Concerning the YX-X new transport project, MITT's advis-

be paid back with interest by

industry when the project turns

YX-X committee to be in charge of organising this project during the development stage, and it also requested that SJAC send a second survey mission to Airbus Industrie and Fokker in Europe in late July to survey the latest possibilities for jointdevelopment of the YX-X with either of these companies.

MITI hopes to narrow down the list of posaible YX-X partners by mid-August to be in time for the FY '81 budget re-quest. SJAC's YX-X committee will also carry out an independent airline survey, including marketability of a new ory council bas advised the 100-150 seat transport, ideal Society of Japanese Aerospace seating arrangement and other

development projects, MITI is development of new technconcerned mostly with the nology in the fields of aero-nature of Japan's ahare in any space processing technique proposed project (i.e., is Japan aircraft equito be a full partner, or not?) materials.

and would Japan have manufac. This report

nation's aerospace industry ment to concentrate on in the should take in the future, future, and further deliberations MITT's Aircraft and industry by the bigh-level advisory group. Council started in the spring of 1979 a total revaluation of the industry's various priorities for the future. The proposals Government policy for the aero-discussed above were released space industry during the 1980s. in the Council's interim-report last August. In addition to the -

preparatory design require above mentioned projects, the Council also recommended that Regarding international joint- the Government promote the space processing technique, aircraft equipment and new

This report received much turing rights, or not? attention as it clearly pointed
To define what course the out the areas for the Governwhen revealed in their final recommendations next spring, are expected to spell out a firm Government policy for the aero-

Paul J. Rubin

Farnborough leads Europe in aerospace research

TO THE public, Farnborough is the setting for one of the world's great air shows every twu years. To the professionals of aviation, however, Farn-horough is one of the world'a great aernspace research centres. With its 10 outstations and a budget of over £80m this year, the Royal Aircraft Establishment (RAE) is the biggest of the 12 research establishments of the Miniatry of Defence, and the biggest research centre of its kind in

The RAE is primarily a de-fence research establishment, although not exclusively for the RAF, which accounts for only an estimated 54 per cent of its the Nevy (13 per cent) and Army (9 per cent), and 11 per cent devoted to tri-service acti-vities. The halance of 13 per cent covers its civil aviation programme. Its considerable re-sources include 50 aircraft of its own with a replacement value of £200m at 1979 prices; and windtunnels at more than regineers among its staff of

The RAE has undergone a

of the pioneers of jet engine development, re-organised the RAE as an integrated research system in response to a growing appreciation of the importance of properly understanding complex systema if a modern weapon is to work satisfactorily.

The big system problem is

one that besets every defence research establishment as it tries to keep affoat in the flood of new information. For the RAE the problem is exacerbated by the fact that complete weapon systems—such as the Nimrod Mark 3 alrburne early warning aircraft and the air defence version of the Tornado. to name two which are making their public debut at this year's air show-finally come together at Farabornugh for their acceptance trials. No other defence research establishment bas the responsibility for approving such complex systems. Its responsibilities extend to attempts to see a complete hattle znne as a single integrated system. The RAE's programme spans

besic systems work (and, of course, the science behind it). the development of new equip-

integrated equipment systems. About one-fifth of its work goes into systems en-gineering, estimates Mr. Harnld Robinson, acting director. A great deal of effort goes into balancing the flying system as a whole. One of its biggest prob-lems is to decide just how much a new system should rely m buman intervention, and how much on "intelligence" huilt into the system. "The human is one of the hest information -but alow," acknow-

With the £10m Tornado GRI, the multi-role combat aircraft which will replace the Vulcan, Canberra and Buccaneer aircraft in RAF service, Farnborough's systems engineers see the end of an era for Europe. They bave been trying to plug more and more "black hoxes a central computer. Tornado needs six times as much memory as the Jaguar. and has three times as much data being exchanged between its black boxes.

ledges Mr. Robinson.

braiu" distributed all round advantage. Faroborough

few years, masterminded by Mr. ment in collaboration with the aircraft in the form of Rhys Probert, the director who about 200 industrial defence microprocessors and ailicon died recently. Mr. Probert, one contractors, and the flying of chips. The Americans have already done this for their F-16 fighter, which includes one key British hlack box, the head-up display, plugged into a common data highway running right round the aircraft.

Strung round a laboratory at

the RAE is the kind of engineering equipment expected to integrate all the weapons and controls of the next generation of RAF aircraft and helicopters. from the late-1980s. A thin black cable looped round the walls inter-connects numerous pleces of avionic equipment spread out nn the benchtops. Each equipment has its special silicon chips tailored to talk the same language so that they can communicate with one another almost as freely as the sub-systems of the pilot—hands, feet, eyes. ears, etc.—communicate with each other.

A lot of the complexity of the weapon system has been encapsulated in the silicon chipslarge-scale integrated circuitsso the black cable is merely a telephone line for the chips to

British Aerospace's Nimrod airborne early warning aircraft with mission system avionics designed and developed by Marconi-Elliott Avionics. Equally effective over land and water, the AEW Nimrod has been designed to replace Shackleton AEW aircraft

currently in service with the Royal Air Force learning, is that such systems An example of an advanced are highly resistant to interference, no matter whether accidental or deliberate due to electronic countermeasures by an enemy. Because the system is constantly checking upon its an enemy. Because the system intelligence round the brain of is constantly checking upon its own integrity "it's very easy to detect and reject corrupt visual display unit (VDU) based messages," says one senior researcher.

Looking further thead, the researchers foresee that with such a data highway built into future aircraft, such as the Jaguar and Sea King replacements, it will become far easier to update an aircraft. Avionic systems are advancing in performance much faster than either airframes or aero-engines. From the nineties a new generation of avionics plugged into the The proposed European talk to each other, no matter same airframe may provide the Combat Aircraft (Jaguar re- where they may be tucked away Services with what for all pracplacement) will have to be a in the aircraft. Another major tical purposes is a brand-new is weapon system.

ment at Farnborough are helmet-mounted sights, which virtually wrap another layer of on an array of exceptionally bright light-emitting diodes. Part of the helmet's electronics is on curved circuit panels beneath a false skin in the top of the helmet. of the belmet

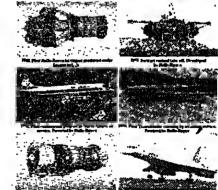
The display itself is an array of 65 addressable diodes on a chip measuring 5mm by 5mm. Its image is focussed at infinity and project via a prism system on to a combiner glass in the visor. The symbols then appear to be overlaid upont he pilot's view of the world outside. Thus he can read all essential flight and weapons information.

David Fishlock



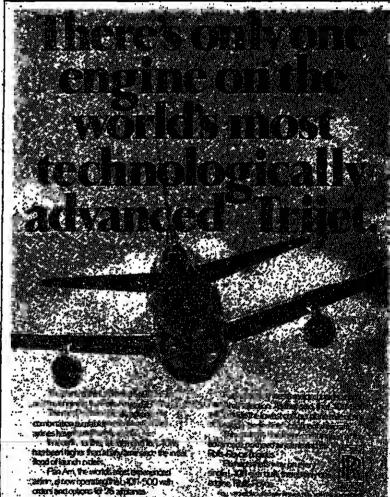
The engine they con effective and the Control of the Con The planting and a second a second and a second a second and a second and a second and a second and a second Late Control of A &





They've just put up the price of not specifying Rolls-Royce on the 747.





These advertisements, from newspapers and aviation magazines around the world, show just a few of our better-known achievements in civil and military

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Royce power and of how we achieved export Meanwhile,

Meanwhile, back at the drawing board. deliveries worth over £1.4m every single working day last year. back at the drawing board, we are busily ROYCE working on tomorrow

The hard-headed sponsors

COVENTRY CFFY football the Arts. He has urged organisa-club will, not after all, be tions from theatre companies in But club will, not after all, be tions from theatre companies in But not all the reasons a named Coventry Taibot. But nrchestras to ask industry to business gets involved in sponnamed Coventry Taibot. in the next few months, in a make up shortfalls in their variety of ways, followers of budgets, the club will be left in no But it donbt that it now has a special link with the struggling car the brewers, the banks, the oil sure concrete results do not

moment Talbot signed it. The Football Association and the BBC objected above all to the name change which would have ensured that the name Talbot appeared on every football coupon, in newspaper results and above all, on television

Yet there is a clear feeling that this amounts to holding a finger in the dyke. Business sponsorship of sport has been hig business for some time and it is spreading to other areas as well

Last week BAT Industries. the only tohacco manufacturer to disclose the full extent of Its promotions hudget, announced that it plans to give the Philharmonia Orchestra £600,000 over the next two years. BAT says the link with its du Maurier brand will "enhance the elegance and style" of its cigarettes.

Operagoers have grown used, meanwhile, to the fact that the Imperial Group sponsors pro-ductions at Covent Garden while other companies not all of them cigarette manufacturers also back a host of other musical ventures, Imperial's re-search shows that its notes in the Covent Garden programmes reach an influential audience of decision makers, particularly in the City. It suggests that it may cancer.

This year corporate sponsor, with in the accompanying smoking.

hip of sports activities is ex- article, base their sponsorship. Gallaber, through its brand, This year corporate sponsorship of sports activities is expected in total more than £30m in part, on a hard-headed caland arts organisations are exculation that for a relatively for sponsoring televised upsmall amount of money there market sporting events. This pected to receive more than small amount of money there £4m. It is a process actively en- are considerable advantages in

companies and the cigarette always succeed.
manufacturers which have been Nevertheless. The deal, thought to be manufacturers which have been worth about £60,000, came tha biggest spenders. All these under fire almost from the sectors are vulnerable to public sectors are vulnerable to public criticism—the banks and the oil companies because of their pro-

sorship are susceptible to this kind of cost benefit analysis. But it is not of course a co-incidence that so far it has been company and attempts to mea-

> Nevertheless, it is possible to isolate several reasons why companies get involved in sponsorship,

Firat, particularly in the case



THE PHILHARMONIA-DU MAURIER LINK: Mr. Peter Roberts, BAT managing director, with Mr. Martin Jones, chairman, Philharmonia Council.

fits, the hrewers because of of cigarette manufacturers, alcoholism and the link hetween sponsorship helps sell products. Cigarette market shares are ette manufacturers hecause of the link between smoking and

From Mr. A. Reynolds

Singapore hnt I have not found

such a rule in the U.S. For

Francisco. Moreover the second advance, having a sterling valua

of £175, was appreciably in excess of the £100 limit mentioned

Neither did Mr. Friedman aay

how cheap this facility can he. There is a 11 per cent fee but

the currency does not have to be paid for until you repay Visa at the end of the 25-day frea

credit period. So until then your

sterling can be on deposit earning interest. My \$400.00 advance

was drawn on the second day of my Trustcard billing period.

By the time I had to pay Trust-card, I had earned the equiva-

40, Leyburn Gardens, Croydon.

Equally rated

From the Assistant Solicitor,

Sir,-I have just read your legal correspondent's article of

August 14, which comments on the case of O'Brien and Others

As the solicitor concerned in the case un hehalf of the

employer. I can assure your correspondent that I would not have advised contesting the

claim in the Industrial Trihunal,

Simon Engineering

y Sim Chem.

basis under the Bills of Exchange pay (or other term, as the case

Alan Reynolds.

in Mr. Friedman's article.

heavily dependent on advertising: recent research showed ancer. that a complete advertising han introduction and take up to 25. The hanks, which are dealt in Norway led to a fall in per cent of funds raised.

month the company will have put up £57,000 of the £100,000

albeit subconsciously, in make more direct links are estab-a link between such "high lished. class" events and the Benson and Hedges brand.

crease general awareness of a is set to continue as more arts company's name, in a way that organisations appoint internal generates good will. Thus, the sponsorship scouts, as already brewers sponsor darts matches bappens in the United States. and in the same way Talbot sees as one of its main reasons for the corporate tax haven many signing the Coventry football critics auppose. The Inland deal the opportunity of hoosting Revenue says that a company customer recognition for a name that is less than a year old.

Third, sponsorship, and this appeals to many companies, can clusively as a husiness cost, for be public "evidence" of cor-porate responsibility. The oil companies such as Shell, BP and Esso, brewers such as Guinness, and computer groups like IBM, advance this as their main aim for backing sports or the arts.

IBM defines corporate responsibility as trying to alleviate problems which threaten the stability of society and to do this "it is involved in projects which provide no immediate credit or material returo." The company, in line with this policy, has hacked a series of regional musical and theatrical productions and recently underwrote a £35,000 guarantec for the Royal Academy's Post Impressionist Exhibition.

It is relatively easy for com-panies to hecome involved in sponsorship. Most large organisations say they are inundated with letters asking for help and what started out as a small affair in the 1950s is now hig business. It has spawned promotional agencies which act as marriage hrokers hetween donors and recipients. Agents, it is claimed. can charge up to £2,000 for the

Sponsors and sporting and arts hodies give these marriage hrokers mixed reviews. Gallaher says it finds them useful and does not have the staff to cover all the events it couraged by the Government sponsoring a whole range of put up £57,000 of the £100,000 sponsors. Imperial, on the other and in particular by Mr. Norman events particularly those that prize money for the Gold Cup hand, thinks the days of the St. John-Stevas, the Minister for attract large audiences on tele- at York. Smokers are expected, agencies may be numbered as

The BAT Philharmonia deal was arranged directly between Second, sponsorship can in- the twn groups and this trend

Sponsorship does not provide claiming a spousorship deduction against tax has to show that expenditure was incurred exexample, advertising. Gifts to charity, particularly local chari-ties, can also he written off against tax since the last Budget as such expenditure is included under good will, a realisable

The Government's favourable attitude to sports sponsorship is reflected by indications that it intends to renew the 1977 agreement on a code of practice with the eigarette companies. This prohibited the use of particular brand product names for events. ruled sports of particular in-terest to young people out of terest to young people out of which they bope to extract hounds and limited spending to good will and, with luck, 1977 levels in real terms. accounts in the future. The 1977 levels in real terms.

Business sponsors normally opt for a "sound" type of event whether in the arts or sport. Their critics complain that corporate hacking sometimes means an undue emphasis on the fashionable or the prestigious and they worry about the vagaries of fashion. But anpporters point out whole sectors of Britain's leisure activity are now partly dependent on busi-

Dr. Samuel Johnson described a patron as "one who looks with unconcern on a man struggling for life in the water, and when he bas reached ground encumhers bim with help." Such damning criticism has not yet been levied at corporate sponsors. It remains to he seen if

Lisa Wood and

Banks take account of the future

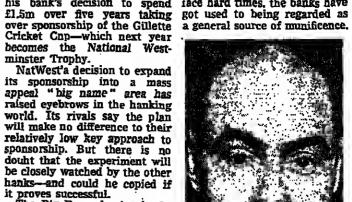
Thus Mr. Ernia Heath, in charge order of magnitude, if not more. of National Westminster Bank's But as the one sector of the sponsorship activities, sums up economy that never seems to Britain. his bank's decision to spend face hard times, the banks have Cricket Cnp-which next year becomes the National Westminster Trophy.

NatWest'a decision to expand its sponsorship into a mass appeal "big name" area has raised eyebrows in the hanking world. Its rivals say the plan will make no difference to their relatively low key approach to sponsorship. But there is no doubt that the experiment will be closely watched by the other hanks-and could he copied if

it proves successful.
The Big Four clearing hanks have hacked projects ranging from net ball coaching to Mount Everest expeditions. But their general aim is to focus sponsorship on clearly defined sectors of the population from hroad hrush approach adopted hy NatWest for the cricket cup will be a significant departure -but it remains, for the

moment, the exception.
The highly targeted nature of the banks' activities explains why there were distinctly cool about the idea put forward hy Mr. Norman St. John Stevas, Minister for the Arts, for a trust fund into which the banks would lump together their spending on the arts. Under spending on the arts. Under Othello and regional produc-the proposal the hanks feel they tioos by the Glyndebourne would lose their individuality. Opera. "We'd rather do our own thing" was the universal

response. The Big Four each have large sponsorship programmes ranging from £250,000 to £800,000 a rear. The sums could however hardly be called lavish in rela-Gareth Griffiths tion to their profits. In fact, the



Sir Jeremy Morse

Functions are often used for hospitality purposes, especially when productions ara on tour in the regiona, though the hank pick up the hill for the tickets. Barclays is a regular sup-porter of Gilhert and Sullivan tours hy the D'Oyly Carte, and this year has sponsored the Royal Shakespeare Company's

NatWest has sponsored the English National Opera's production of Fidelio, given help to Sadiers Wells and the Scottish Opera.

For the ninth year running Midland has belped present the Covent Garden Proms. Lloydswhich puts particular emphasis on youth and avoids sponsoring

"WE'RE HELPING CRICKET from which they get no commer-major commercial groups-put and we're helping ourselves." cial returo—amount to a similar the largest chunk of its arts money into the The National Youth Orchestra of Great

In sports, football (because of the hooligan element) and racing (the link with gamhling) are out. Most of the hanks however support some kind of equestrian competitions. Nat-West's activities include rowing. rugby, fencing and bockey; Barclays, skiing and rugby. Lloyds does not sponsor any sports at all but puts a lot of money into junior chess, a

Jeremy Morse. Midland bas moved their sports sponsorship into more downbeat areas to try to appeal to "un hanked" sections of tha population. Next year it will he sponsoring the world angling championships, and it is also spending £50,000 in aupporting gymnastic activities in schools.

favourite game of chairman Six

The hanks say that evaluation of the effects of sponsorship is extremely difficult. Midland says its activities are "additional hackground" to hack up more obvious forms of promotion like

advertising.
The other sector of the City that also goes in for sponsor-ship—the insurance industry— claims its activities are easier to assess as they are less diverse. Corohill, for instance, has heen sponsoring Test matches since 1978 as its only form of promotion.

Before it started, aamples showed that a mere 2 per cent of the population ranked it as a major force in insurance. Now. "name awareness quota' has gone up to 16 per cent. According to Mr. Fred Dinmore, Cornhill's manager responsible for the cricket support, "that proves sponsorship works." He adds wryly that every year since the Cornhill Tests started, it has

been a rotten summer, David Marsh

Letters to the Editor

Japanese know-how

is more....

From Mr. N. Heaney Sir,-Sir Michael Wilford's emphasis (August 13) on technology as a key to Japan's industrial competitiveness is of paramount importance for England, yes, but also for Europe and the U.S. Yet there

In Japan three years ago I sought answers to the question, How is Japan able to bear us so handily? It was evident that co-operation between unflagging management and the well-educated and indoctrinated work force yields products of work force yields products of high quality and low cost. Waste is fought at every stage by relentless, exacting methods. For example, Toyota's system of production control, named Kanban, has now spread throughout the automotive in dustry. The system requires suppliers to deliver material in small lots, once, twice or three times daily, directly on to the assembly line. Lightning fast tool changes become essential: Toyota changes an entire automatic press line from left to right fenders in six minutes. right fenders in six minutes, and the first right fender is "good." The system reduces inprocess inventory to a trifling fraction of that seen in the U.S.

Without an understanding of the range and depth of Japan's industrial know-how, we may not take fright sufficiently.

N. S. Heaney. 76, Shipwright Street, Annapolis, Maryand 21041 USA.

Them and

us

From Mr. J. Hendry. Sir. - The Department of

Employment Gazette for July 1980 contains the following sentence (page 755, column 3):
"Redundancy Fund transactions for the period January 1 to March 31, 1980, concerned 85.274 employees, including one government employee."

May I invite readers in both Government and industry to consider that statement and its im-

J. A. Hendry. 7, Welburn Avenue, Leeds.

Time limits on cheques

From Mr. D. Croome of Appeal, had not I. and counsel instructed by me, considered intends to escape the Tunbridge intends to escape the deduct he refers to an Appeal 21. dodge he refers to on August 21. of the Act was the correct one.

It is a simple matter to innamely that the effect of the correctly draw a cheque ten words "determined by the correctly draw a cheque ten words years ont of date, so that any rating of the work" is that the time limit imposed to determine sub-section in question cannot whether a cheque is stale or not operate to benefit a claimant will be open to abuse. No doubt unless or until he or she can his suggestion that the banks' point to another employee, of six month rule be amended to the opposite sex, doing an two years is also without legal equally-rated job, whose rate of

may be) can be said to be The answer to the problem is "determined by" the rating. surely one of commercial con- It is important to realise that sideration. It is awkward in the Sim-Chem case no pay adenough trying to reconcile the justments had been made at the enough trying to reconcile the average personal bank account but, when large businesses are job evaluation scheme and that, year of "Pye Telecom" as a donation to the Labour Party required to relate back two therefore, no employee, male or British trade mark. No chance was wholly derived from legations. required to relate back two years, and almost certainly for small amounts, then the task pay could reach mammoth propor rating. plicity and peace of mind, I correspondent's article with inability to think ahead in pro-

ore than satisfactory. am unable to see why the It happened with "Viewdata": Broadway Chambers,
Mr. Tunbridge's remarks conemployers' argument "would "too general a term, so can't be 245-247 Cricklewood Broadway, suggest the present system is more than satisfactory. cerning the January situation clearly defeat the purpose of registered . . ", or something N.W.2.

certainly adds a further dimen- the act." At most, it would similar, we were told was the

The approach of Lord Russell cheques drawn are part of the current sequence determined by in his speech, with which the was an independent private the cheque numbers. Obviously, other Lords of Appeal merely limited company View Data the great number of errors made concurred, is highly unsatis-registered and in existence some in dating cheques in the first few factory, if I may respectfully years before that days of a new year makes the say so, in that it amounts task for the hanks extremely virtually to disregarding the difficult, but I doubt whether words in issue and in doing so, ported into this country and trading under that name for pretation and the implications of the structure of the section, in which the words "determined by the rating of the work" are the only distinction between the country and trading under that name for some time—luckily, in a product category a long way from an information service, so British Telecom's Prestel thrives on. any alteration in current prac-tice is likely to he of benefit to general rules of statutory inter-bank customers.

The face of both the general rules of statutory inter-pretation and the implications D. J. Croome. 17, Anglesey Court Road. Carshalton Beeches, Surrey. Unlimited

I remain of the opinion that the appropriate interpretation of the Act is that contended for by the employers and supported by the reasoning of three Sir.-Mr. Murdoch (August 21) may have been permitted to take only one cash advance per week on his Visa card in separate, carefully reasoned judgments in the courts helow. In fact, I think that, perhaps without realising it, your correspondent is, in the second half example, on April 15 I drew \$50.00 in Dallas and on Friday of that week \$400.00 in San of his ninth paragraph, supportthe employers argument and disagreeing with Lord Russell, although I would not accept that the examples which he gives are appropriate ones. C. H. G. Mackenzie.

Simon Engineering, P.O. Box 31, Stockport, Cheshire.

Perfect epitaph for a corset

From Mrs. P. Graham.

Sir,—I was wryly amused hy Mr. Riddell'a article of August 19, reporting on W. Greenwell's views on the starling M3 figures. Greenwell, as reported, is much confused about them: "No lent of \$5.87 in interest. This almost covered the \$6.00 cash advance fee.

one can he sure where we are or where we have been, and the uncertainty could well extend into the future." There is, incidentally, a logical non-sequitur here: if we do not know where we have been and where we are, it follows that we do not know where we are going; there can be no uncertainty about our ignorance as to the last.

I would not presume to

enlighten Greenwell on our tion. Hence, there is no reason sterling M3 ignorance. If I for him to regard my letter as can, however, throw light on the matter of "cursets." They were devised not to distort but to mould the relevant part of the Lea body to the shape dictated by fashinn; nn "unwinding" was effected on removing the garment; the action involved was "unlacing;" and the corset has long been an obsolete garment: perfect epitaph" lies not in the M3 figures for the month to mid-July but hehind glass in maseum show-cases. (When women symbolised their liberation, they burnt not their corsets, but their bras.)

(Mrs.) P. Graham. 6, Beacon Hill, N7. **Trading**

names From Dr. S. Castell

Sir,-E. T. Parker (August animal. female, was enjoying a rate of registration, nor early takeover cles and it seems pretty certain pay "determined by" the strategy, I feel, but probably that the testators in question another regular step in the if they were able would object.

There is much in your tragedy of the PO's seeming most strongly. which I could take issue, and I tecting its future trading names. Fialko, Burns and Co.,

sion regarding this problem, but make its scope more limited reason for the PO having to I believe the majority of banks than would a rival change from Vlewdata to Presdo try to determine whether the interpretation. videotex service. But there was an independent private

Then, whoops, "Prestel" was found to be also the name of, I think, an Italian product im-

between the provisions relating fully register "Telecom" in the to like work and those relating first place? Have not most to equally rated work. been using "telecon" telecom" to mean respectively " telephone conversation " "telephone communication" as regular business jargon/short-band? Perhaps, then, the PO came to this view as well and can he forgiven lts seeming lack

> And perhaps the Government should try and save a little more money by throwing out the Registry of British Trade Marks also, when it dispenses as planned with the Register of Business Names, if such hoohs continue to be perpetrated (sorry, "Boobs" is probably someone's registered trade mark. . . .)

Dr. Stephen Castell. Computer and Systems Telecommunications, 20, Grange Road, Witham, Essex.

Gifts to **Parties**

From Mr. L. Fielko Sir.—May I reply to the letter (Aug. 19) from Mr. A. Shaw who during 1979 was the acting executive director of the League Against Cruel Sports. I had some correspondence with him in which my extreme opposition to the donation of £80,000 to the Labour Party was voiced and I also expressed the possibility that the payment was ultra vires the objects clauses

in the memorandum of associa-

I should perhaps add that when I first considered joining the League some years ago, I naturally perused its literature carefully, and I certainly found nothing to suggest that the executive committee intended to make any donation whatsoever to the Labour Party, let alone the relatively consider-

able sum of £80,000.

The League's annual income apart from legacies has not in the year 1978 (which is the latest for which accounts have been published) or in the two previous years and probably for many years before that - been sufficient to meet its revenue expenditure and it has had to use part of the legacies it receives to meet the balance, and therefore only part of the legacies for its main purpose of purchasing land to provide sanctuary for the

L. Fialko.

Today's Events Intercational Motor Cycle United Nations Assembly East oil-exporting countries to

GENERAL .

UK: Aerospace in the Eighties and Beyond, conference jointly sponsored by the Financial Times and the Royal Aero-nautical Society — speakers ioclude Sir Austin W. Pearce, British Aerospace chairman, Mr. Donald J. Pepper, Rolls-Royce vice chairman, Mr. Roger Beteille. Airbus Industrie managing director, Royal Lancaster Hotel, London W2 (until August 22)

(until August 30).

Reg Livermore (Australian comic) opens in Sacred Cow, Phoenix Theatre, London.

Recital by Petronella Dittmer ence and Exhibition, Ensemble, St. Lawrence Jewry, Gresham Street, London, 1.0 pm. (until August 29). Overseas: Lord Carrington, Foreign Secretary, visits Sandi Arahia, following restoration of diplomatic relations.

Show, Earls Court, London meets to discuss alding energy discuss horrowing petrodollars. development in Third World, New York

> King Olay opens Offshore North Sea Technology Confer-(until August 29).

Mr. Jacques de Larosiere, International Monetary Fund managing director, tours Middle

COMPANY MEETINGS

See Financial Diary on Page 12. COMPANY RESULTS

Final dividends: Crouch Group, Joseph Stocks. Interim dividends: II. Brammer, Fair-clough Construction Group, Hong Kong and Shanghai Bank ing Corporation, IMI, Provincial, Queens Moat House.



We have acquired a lot of experience during our climb to become the 2nd biggest European airline and the 6th in the world. Now Iberia, International Airlines of Spain, offers you 94 destinations in Europe, the Middle East, America and Africa.

And always with the same friendly, personal attention that we have been giving our passengers since we were a small airline. Perhaps we owe our growth to our exceptionally well-trained crews, the most modern aircraft, our highly qualified mechanics and ground personnel. But we have not lost the personal and friendly touch. Because for Iberia what matters

most of all is the passenger. You.

We take you further.

OIL AND GAS NEWS

Medens Trust advances 17%

fident that income for the second

balf will be satisfactory and

As at June 30, oet assel value per share is shown as 223p com-

pared iwth 201.5p at December 31, 1979.

BOARD MEETINGS

FUTURE OATES

Rowater Sect. 9
Crouch (Ocrek) Sdpt. 5
General Mining Union Coron. Sect. 4
Montlort (Knifing Mills) ... Sect. 10
Phoonie Asaurance Sect. 2
Quick jH. and J.) Aug. 28
Spencer (George) Sagt. 11
Finels.

FT Share

Financial Times.

Information

The following securities have

been added to the Share Infor-

mation Service appearing in the

Home Farm Products (Section:

Metals Energy and Minerals

Standard Fireworks (Indus-

BUCKLEY'S BWY.

World Leaders in the Manufacture

of Valves and Boiler Mountings

Extracts from the Chairman's Statement circulated with the Accounts for the year to 1st February, 1980

Trading profits for the year 1979-1980 were not significantly different from those of the

previous year. The year began in the aftermath of the transport strike and was disrupted

by the national engineering strike; also, more psychologically than physically, by the steel strike. Measured in terms of past performance and the great demands upon the Group to maintain its position in the industry the results are disappointing, a reaction

a change in the barometric pressures of life which brings home even to such an established organisation the necessity for a shift of emphasis to meet the challenges of the

times; such shifts are not easy to accomplish within an industrial family. The effects of the

strike have been significant but an order book which must be judged satisfactory on any

circumstantial test should lead to productivity benefits to their reduced workforce and to

The order books and activity levels of our other two main subsidiaries, J. Blakeborough &

Sons Limited and Bryan Donkin Company Limited, are a source of comfort in these days.

RESULTS FOR THE YEAR ENDED 1st FEBRUARY, 1980

Hopkinsons Holdings Limited, Birkby Grange, Hudderstield HD2 2XB

This advertisement is issued in compliance with the requirements of the Council of The

Stock Exchange, it does not constitute an invitation to the public to subscribe for or to

purchase any Stock of the Company.

£'000

42,419

2,146

1,573

5.65p

972

profitability to service the business and the capital thereto committed.

somewhat tempered by comparison with the same and other sectors of the industry. Turning to more immediate history, the strike at Hopkinsons Limited which terminated some six weeks ago is not to be judged on its own domestic level. It was symptomatic of

Hopkinsons Holdings Ltd

(Mines-Australian).

was £453,823 (£347.537).

rowing costs from £1.2m to £2.1m. profits before tax of Medens Trust, the instalment expect the final dividend to be figure group, rose over 17 per not less than the 5.5p of last year cent to a record £750,367 for the revenue after (ax. for 1979, year ended June 30, 1980, compared with £637,874.

Turpover for the period climbed by 15 per cent to £24m. which reflects a further advance in the group's bire purchase

Mr. Alford Collins, the chair-man, says that despite the difficult economic climate, business is cootinuing at a satisfactory level and further modest progresa is looked for in the current

the following companios have notified dates of Goerd meetings to the Stock Eschangs. Such meetings pro usually held for the ourcoses of considering diurcends. Officiel indicarions are not available as to whether dividends are interime or finals and the subdivisions shown below pre based mainly on last year's timetable, The tolal dividend is being raised from 1.3p to 1.5p per Share, with a final of 1p, payable TOOAY
Interims—H. Brommsr. Feirclough
Construction, Hongkong and Shanghai
Benking, IMI, Queens Moat Houses.
Finels—Crouch Group, Joseph
Stocke. October 21. Shareholders' funds increased by £0.34m to £2.88m

Noble & Lund shows rise at midway

On turnover virtually static at £1.28m, pre-tax profits of Noble and Lund, engioeer and machine tool maker, rose from £58,224 to £63,751 in the first half of

But the directors warn that the intake of orders has seriously declined and, noless there is a significant improvement, the re-sults for the second balf are unlikely to be as satisfactory. For the whole of 1979, there were pretax profits of £68,000, down from £172 000.

Earnings are shown as 1.12p (1.02p) and the interim dividend is beld at 0:175p—last year's final was 0.245p.

INV. TRUST OF GUERNSEY

After-tax revenue of Investment Trust of Goernsey was virtually unchanged at £203.000 for the first balf of 1980, against £207,000, and the gross Interim Buckley's Brewery has acquired Llan Mineral Waters, Llangenocch, for £82,000 cash. dividend is increased from 3.5p to 4p per 50p sbare.

Ward Hldgs. declines in first half

AFTER AN 89 per cent immp to a record £2.34m in the last full year, pre-lax profits of Ward Holdings, property developer, fell back to the six months to April 30, 1980 tn £813,000, compared with £866,000 in the corresponding period.

The present generally difficult market conditions will have a bearing on the profit performance of the group at some stage, warn the directors who, with their families, now control 62 per cent of the equity.

The interim dividend is held

-in March holders received a 1-for-2 scrip in deferred. Total payment for 1978-79 was Turnover in the first half went up from £4.49m to £5.9m

Burndene's capital plans abandoned

In view of changed circumstances Burndone Investments ia not going abead with its proposed capital reorganisation.

The company says that since the scheme was proposed to November, 1979, trading conditions have become increasingly difficult particularly in relation to the carryan manufacturing operation. In this area a significant reduction in export sales, aa a result of the strong pound, left large stocks in the group's handa which incurred beavy borrowing charges.

This, the directors explain, led to a reduction in production to an unprofitable level and further losses were sustained. Stocks are being reduced as quickly as posaible but market conditions remain very difficult, they stress. The petition to the court for the capital reduction will there-fore he withdrawn. As provided In the special resolution, the two capital shares of 5p each allotted in respect of each ordinary share of 5p then exist-ing will, after being converted into ordinary shares, be consolidated with that existing ordinary share to become one ordinary

1979

£'000

39,976

2,398

2,300

2,169

5.65p

Unitech warns of slowdown

demand for the first two months ahead of last year, Mr. P. A. M. Curry, chairman, tells members that conditions in the electronics iodustry are more difficult than

While another year of progress is expected, he says the rate of increase is likely to be considerably less than it has been for the past few years.

As reported on August 6, a jump in profits from component marketing from £1.2m to £2.01m helped push the taxable surplua to £5.26m for the year ended May 31, against £3.56m, from sales of £71.Sm (£45.9m). dividend is stepped up to 3.99p (3.33pt net per share.

Mr. Curry says the acquisition of Alfred Neye Enateconik, of Germany, coupled with the atrong underlying growth of the existing distribution business puts the electronic component marketing division "well on the way to becoming a truly Euro-pean distributor," with more than 65 per cent of distribution salea in the current year expected to arise outside the UK two months' profit contribution Enatechnik amounted to

£205,000. The group also received a first-time 12-month contribution from Comatel SA-profits were £414,000 on sales of £4.9mwhich boosted the component manufacturing sector's profits to £1.21 m (£788,0001.

On the industrial controls side, where profits slipped to £516.000 (£609.000). Appliance Components, the largest contributor to divisional profits, experienced a setback due to a reductioo in demand for its pro-

ALTHOUGH THE current year ducts in the beating cootrol at Unitech bas started well with market.

Tempatron, however, achieved record results and demand for the company's electronic timers cootiones to be strong "and a good start was made with the Fifitsu product line," the chairman statés.

As at May 31, the group's sheet shows share-funds of £18.16m bolders' (£9.04m), bank overdrafts £8.04m £3.03m), and cash at hank and in band of £3.7m (£1.52m).

On a CCA basis the historic pre-tax profits are reduced to £4.45m (£3.05m).

The auditors state that provisioo haa been made for all deferred, tax, cootrary to the requirement of SSAP 15 that provision ahould only be made where there is a reasonable probability that such tax will be payable to the consequence of the state of the consequence of the conse able in the foreseeable future.

The effect of the gronp's treatment has been to increase the tax charge for 1979-80 by £1.8m (£774,000) to £2.63m (£1.5m), and to reduce retained earnings by £4.85m (£3.06m) to £5.4m

Meeting, Abercorn Rooms, EC, September 19, at noon.

MALLINSON-DENNY **EXPANSION**

Mallinson - Denny's Australian subsidiary, Mallinson Pty... bas acquired the assets, goodwill and trading name of Plywood Panel and Veneer Pty., at Townsville, Queensland.

This will give the group's Australian interests, which are currently enjoying very success-ful trading, access to the fast developing agricultural and mineral markets of North Queensland.

RESULTS AND ACCOUNTS IN BRIEF

ARGYLL FOOOS (burcher, freezer ARGYLL FOOOS (burcher, freezer lood and grocery group)—Redults for 1979 and oroopects for the 15-month pariod to March 31, 1981 reported on July 1, 1980. Shareholders' funde (t 64m (£0,52m], bank loans £1.09m (nil), ouerdraft £0.33m (£1,33m], cash £0.87m (£2.000). In p ouelylication to the accounts, the eoditors ptate that the compolitation of Mornan Edwards from Oecember 31, 1979, although not complying with sections 150 and 154 of the Companies Act (1948] and with SSAP 14, does not rander the accounts mizefading Meeting, Stafford Hotel, London SW, September § 31 noon.

SERRY PACIFIC (STERLING) FUND, the investment company, reports a net loss of £61,707 for the period April 1, 1990 to June 25, 1990. Net assets at offer valuation equivalent to all shareoner valuation equivation to all share-holders' equity as at: June 25, 1980, £10,3m. No dividend is proposed for the petiod. The valus of the shares held in Serry Pacific Fund of June 25, 1980, was £10,32m, representing 30,32 per cent of the issued shares of Serry Pacific Fund.

ALACK ARROW GROUP (wholesale and reteil distributor of office lurniture. clectrical components and electrical appliances]—Results for year to March 31, 1380, already known. Shereholders' 1unds £3.13m (£4.85m]; debturs £914.575 (£1.12m]; benk balences and cash £3,394 (£3.193]. Cheirman says eeles and profits in fir31 three and shell months are running at a lower level than last year. but there are signs of improvement in the order book. The downturn in bispless in the winds and cover-distingtion of the provision signs of Improvement in the order book. The downturn in business is consumer electronics has continued into the current period and it is not anticioated that profits will move shead that year. Maetin: Hounglow, Middlesex, September 24, 2 pm.

Cariton Towar Hotel, SW. September 12 HOWOEN GROUP (engineer, eir, ges

HOWOEN GROUP (engineer, eir, ges and fluid hendling equipment manulecturer)—Results for year to April 30; 1980, given in full preliminary report on July 11. Shareholders' (unde £4.06m (£21.43m); cesh and benk bolences £5.99m (£7.46m]; debtore £32.15m (£31.03m). Meeting, Glesgow, Septombar 18. noon. ber 18, noon.
G. F. LOVELL (confectionery manulecturer)—Pro-tax großt for half-year 10 Agril 26, 1980, E87,000 (E124,000), tax £45,000 (£54,000), turnover £2.42m (£2.2m), interim dividend 3p (seme), earnings per shere 4.289p (5.068pl.

NOVA (JERSEY) KNIT—Results for year to March 31, 1980, diready known. Shereholders' funds £2.29m (£1,9m), bank balences and cash £211,489 (£215,830), overdreft £103,060 bank balances and cash £211,488 (£215,830), overdreft £103,060 (£162,928). Chairmen states that liquidity hee improved substantially since the year end. Measurg, London, W1, September 15 at 11.33 em. WELLMAN ENGINEERING CORPORATION—Results for year to March 31, 1980 already reported. Shareholders' funds £3.65m (£6,27m), Long-term loen £3m (nil) used for acquitation of HBO. Chairman says group rameins in heelthy finencial control. Meeting, 25 Wilton Rozd, SW, September 11 et noon.

signs of Improvement In the order book. The downturn in birsiness is consumer electronics has continued into the current operiod and it is not anticlosed that profits will move shead this year. Maetina Hounalow. Middlesex, September 24, 2 pm.

C.H. INDUSTRIES (trims. losms. building products, property)—Results for year to March 31, 1980, already known Shareholders' lunds (56.05m) (55.95m). Devertorities (15.35m). Overdrefts (

Pentland ahead at six months

With pre-tax profits rising from £322,000 to £419,000 ln the six months to June 30 last, the directors of Pentland Industries, industrial holding company, are hopeful of achieving a year of satisfactory growth.

rose by over film to film. After tax of £95,000 (£42,000) and minorities of £11,000 (£4,000) attributable profit was up from £284,000 to £313,000.

paid on profits of £1.03m.
The directors say the 30 per cent advance in trading profits was achieved despite the downturn in the general economy throughout the world. But they add that this situation makes it difficult to predict the effect on the company for the rest of 1980.

Once again it will not be possible to take full advantage of the group's productive capacity, despite the constant process of reducing such capacity, members are told in his annual statement.

to £2.21m, on higher sales of £29.41m (£26.13m). The dividend is being raised from 3.35p to 3.5p

Price	
%	for -
228	
256	
212	
231	
	41
	T-1
00.2	
	228

BP Australia joins **Queensland** search THE AUSTRALIAN subsidiary well other interests in the permit of British Petroleum—British will be Woodside Petroleum, 30 Petroleum Company of Australia per cent, North West Shelf

is joining the search for oil-

Oil-shale is a sedimentary rock

containing kerogen from which oil can be extracted.

by Central Pacific Minerale and Southern Pacific Petroleum,

which are the subject of a possible U.S.\$13 to \$16bn

Alliance Petroleum Inter-national, a unit of Australia's

national, a unit of Australia's Alliance Oil Development, has entered a farm-in agreement with holders of the Dampier subbasin permit WA-1-P on

The farm-in area comprises 75 blocks, but excludes the nine

block area around the Angel gas

field. Alliance can earn a 40 per

cent interest by drilling one well

in the permit area.

hasin permit WA-1-P Anstralia's North West Shelf.

shale in Queensland, Australia.

Turnover during the half-year

The Interim dividend ia increased to 0.35p net (0.271p). Last time a total of 1.271p was

Mitchell Somers profit trend

Southern Pacific.

BP has entered the search by signing a joint venture agreement with Mining Houses of Australia giving BP an 80 per cent interest in two Queensland off-shale leases in the Callide Basin at north west Biloela and southwest Mount Morgan. There is every prospect that current year results of Mitchell Somers, forgemaster, engineer and discaster, will not be as good as in 1979-80, says Mr. L. J. Thomas, the chairman.

Taxable profits for the year ended March 29, 1980, fell £0.3m

Inflation adjusted profits abow a sharp drop from £1.12m to £0.37m at the pre-tax level. Meeting, Hyde Park Hotel, SW, September 18, noon.

Dairy and meat group merger

THE Associated Dairies group has merged its dairy and meat interests to form a new subsidiary, Associated Fresh Foods, which will have a turnover of £145m a year, writes David Chnrchill.

The merger will create a third tradlog arm for the group, alongside its Asda superstores chain and Allied Retailers operation. The new subsidiary has received over £12m in investment over the past four

l	SPAIN		
		Price	
	August 25	%	+ or -
	Banco Bitbao	228	
	Benco Centrel	256	
	Senco Exterior	212	
	Banco Hispano	231	
	Benco Ind. Cat	120	
	Sanco Medrid	141	
		279	
	Banco Senlander		
	Senco Urquijo	139	
	Sanco Vizcaya	240	
	Sanco Zeregoza	215	
	Oregedoe	103	
	Edpanole Zinc	68	41
	Focea	66.5	
	Get. Preciedos	27	
	Hidrola	69.5	
	Iberduem	68	
	Petroleos	111.5	
	Patroliber	87	
	Sogefise	107	
	Telefonica	62.2	
		88.2	
	Union Elect	90.2	

WEEK'S FINANCIAL DIARY

The following is a record of the principal business and financial engagements during the week. The Board meetings are mainly for the purpose of considering dividends and official indications are not always available whether dividends concerned are interima or finals. The sub-divisions shown below are based mainly on last year's timetable.

OIVIDENO INTEREST PAYMENTS—
Baker Intol. Corp. 10cts
Brownieg 40. Soeth 1.75pc
Boton Corp. 43cts
Excheque 121gc 1992 61pc
Gillapur 2.75
Bank Mar. 2.75 Gilfspur 2.75 Rank Hows McDoupell Lns. 6126 471990 Watson and Philip 10 TOBAY
COMPANY MEETING—
Yan (John) Newmurt Swan (John) Newmurt Road.
Edinbursh 4.00
BOARD MEETINGS—
Finals:
Crouch Group
Stocks: /Josephi
Interims:
Brammer (H.J)
Fairrfough Consciuction
Hongkong and Shanghel Benking ms Moat Houses

OPVIDEND & INTEREST PAYMENTS— Associated Fisheries 0.250 Durar Inv. Tsr. Income 2.25p Drayton Far Eastern Tst. 0.40 Powelf Outryn 90 Scottish and Nowcastle Breweries 2.8750 Swan 1.30hn) 6.75p

COMPANY MEETINGS
Arington Motor. Chertered Accountants
Hull, Moorgate Place, EC. 12,00
Investment Co. 16, St. Mertin's-Je-Grend.
EC. 12,00
Jatel I Hobart Prec. SW. 11,00
Lendus Rusher Estutes, Tuba Hill House,
London Roud, Sevenocha. 12,15
Technology Inv. Tst., B Crosby So., EC.

10.30
BOARO MEETINGS—FIRAC:
Associated Oairles
Brown Brothers
Consolideted Plantatione
Mounticigh
Victor Products (Wellsend)
Interims:
Blue Circle Industries
Cement-Roadstono
Ladbroke
Pearl Assurance
Robinson 'Thomas'
Potosk Potosk Roval Wortester Slough Estates

OlVIOSNO & INTERÉST PAYMENTS—
Citicoro Overacee Floence Cara, Grd.
Fitto. Rare Notes duc 1983 U55260.35
Common Merket Tst. Ptg. Pt. 39p
Oawson Inful 4.50
Greshem House Estate 2.25a
Lendu Rubber Estates Ord. Units 1.1p
Rembis Rubber Units 0.50

THURSDAY, AUGUST 28
COMPANY MEETINGS—
Bassett (George) Livesey Street, Owierloa Shottleid 3.30
Cewoods Southlands, Ripon Rd., Harrogete, 12.00 12:00
Cocksedge, Grevirier's Road, Ipswitch, 12:00
Cocksedge, Grevirier's Road, Ipswitch, 12:00
Cocksedge, Hunglet Forge, Leeds 2:30
Greshem House Estate 2d. Austin Friar;
EC 10:30
Gresham Inv. Tst., Barrington House,
Gresham Street 12:00
Croveboil Winchester House 77. Lpadon
Wall, EC 12:00
Hollis Brothers Howerd Hotel, Temole
Place WC, 12:00
Initial Services, Consentht Rooms, Gr.
Cueen Street WC, 12:15
Monk 1A:1 Green Lane, Dadgete, WarringIon, 3:00 Monk IA. I Green Lane, Dadgete, Warring-ron. 3.00 rembra. Winchester House 100 Old Broad St. EC 12.00 Phillips Parents Grand Hotel, Aytoun St., Marchnayer. 12.00 Perland Plaisterers Hall, 1. London Wall, EC. 12.5 Vinten Group Angel Horel, Bury St. Edmunds 12.00 ROARD MEETINGS-

enmmercial Bank of Australia Ershine House Investments

Quick (H. and J.) Scottish Agriculture Industries Snarge and Fisher Yorhahlre Chemicals OIVIDEND & INTEREST PAYMENTS— Apriculturel Mortuage Corp. 41:pcOb. 1977-82 24pc Alchanders Oiscount S.So Associated Newspapers 4.5p Banh of Montreal 39cts Corp. Fachergo 0.3125p Cawoods 2.1p Corn Exchenge 0.3125p Gough Cooper 2.1p Gresham Inv. Tst. 2.120 Corn extra Corner 2.1s Gresham Inv. Tst. 2.12o Kleen-E-Ze 40 Kwih-Fit (Twres and Exhapsts) Ln. 4pc Liverpool 1 3pc 1985 61:pc Metropolitan Water 51:pc 1975-80 21:pc Mid-Sussex Weter 7pc Red. Pf. 1983 2.45pc Security Servicos 41:pc Pf. 1.575pc Security Servicos 41:pc Pf. 1.575pc Sheffield Revieshment Houses 1.620 Technology Inv. Tst. 2.6p Williams and Glyri's Banh Floating Rate Cap. Notes 1984 US\$35.25

FRIDAY, AUGUST 28
COMPANY METINGS—
Brotherhood (Pcler), Winchester House,
100 Did Broad St. Et 12,00
Landon frw. Tst.. The Moward Hotel.
Temple Place, WC. 11.30
Loothill (R. W.) Durham Wav. Aycilfie
Ind, Est., Qerlington. Co. Ourham, 12,00
Mersion, Thompson end Evershed.
Shoonulf Pad. Burton-on-Trent 11.30 BOARD MEETINGSnais: Pher end Oobson Ploperrods Agon Finunce Plopina Construction

Alcun (Aluminiom) (UK) Jucks (William) Scottish Korthern Inv. Trust OIVIDEN TO THE TIME TO THE TOTAL TO THE TOTAL THE T sergen bains 225 188 1998 US\$25.58
Surron 20
Chiphs 3.47849
Chiphs 3.47849
Chiphs 3.47849
Chiphs 3.47849
Chiphs 3.47849
Chiphs 2.100 High 180 High

Liords Bank 7-5c Lowrence Inv. SpcPl. 1.75pc London and St. Lawrence Inv. SpcPl. 1.75pc London and Scotlish Merine Oil Ln. 7pc Menufacturers Hanover Overseas Cap. Corp. Fire. Rate Notes due 129.4 US\$25.24 Milbury 2.8p Murray Western Inv. Tst. 0.50* Nelfoaal Westminster Jank 3.75pc. 7pcPl. 2.45pc Northern Foods 2p Oglive end Mather Inlni. 32cts Penema (Republic of) Fits. Rate Set. Notes Oue 1990 US\$910 Romney Tst. Ord Unite 1.30 Romney Tst. Ord Unite 1.30 Romney Tst. Ord Unite 1.30 Romney Parke Benet 3.5p. 31pcOt. 4.75pc United British Securities Tst. 10. Oo. 4.3p Whithington Engineering 2.1p Yule Catro 0.3m

SATURBAY. AUGUST 30 SATUNDAY: AUGUST 30 DNO & INTEPEST OAYMENTS-DNI La. Blapc (G. and G.! 2-275pc Joinery OB. 4::pc Thompson and Evershed 10

SUNDAY, AUGUST 31

OIVIOEN O & INTEREST PAYMENTS—
Allnatt London Properties Do. Slage
Astee, Seculet Manufacturors Lns 31, Slage
Astee, Seculets (Headery) StapePf. 1.92Spc
Automated Sec. BocPf. 4pc
Brisbords 1.2, BocPf. 4pc
Barry 1st. Ln. 21gps

2000's capitaliastn. 3,006 525 10,387

British Industrial and General Inv. Tst. Ob. 3iapc CLRP Irv. Tst. Db. 3ispc CLRP Irv. Tst. Db. 3ispc Centre London (New) Gbd. Assd. 1pc Combined English Storea In. 4iapc Dowly Ll. 3ispc. 7.75pc English Storea In. 4iapc Dowly Ll. 3ispc. Tst. 2is 3iapc Ecolity Income 3.25, 1.5pc. 2is 3iapc Ecolity Income 3.25, 1.5pc. 2is 3iapc Ecolity Income 1.25pc. 1pc. 2ispc. 5.75pc FFI (Uk. Finance) Ln. 4iapc Foster (John) Ln. 6ispc General and Commercial Inv. Tst. 5iapcPi. 1.925pc Greatermans Stores Pl. 3pc. Pis. 2ispc. 2i

Kaiser Aluminium and Chemical Corp. 35cts London end Holyrood Tst. Ob. 21pc London end Strathchyde Tst. Ob. 21pc London end Strathchyde Tst. Spc.M. 1.7Spc May end Hessell 5pc.Pf. 2.1pc May end Park end Wallington Inds. 71pc.Pf. 2.625pc Scott and Robertson Ln. 31pc Seascope 101pc.Pf. 5.125pc Sout and Robertson Ln. 31pc Seascope 101pc.Pf. 5.125pc Shaw Carpets Spc.Pf. 2.2pc Illimor (Thomas) Db. 4pc Travia end Arnold Ln. 4pc Trolevest Overseas Fund (Spc.Pf. 01s-17button 180 2.25cpc tal. Spc.

Triolevest Coursess Fund takening.
Triolevest E80
T

Queeosland contains the huge Rundle oil cshale deposits, owned Canada's Sceptre Resources, the fast-growing Calgary oil company associated indirectly with the Power Corporation of Canada group has withdrawn an offer to purchase shares of canada group has windrawn in offer to purchase shares of Buttes Gas and Oil Company of Oakland, California, reports Robert Gibbens from Montreal. Buttes, a medium-sized U.S. nit producer, said the Sceptre offer of \$28 a share was inadequate. possible U.S.\$13 to \$16bn development programme by Exxon Corporation of the U.S.

The state also contains the Nagoorin prospects, around 80 km from Rundle, which bave provided a number of oil-shale discoveries, notably by Mining Houses of Australia and Greenvale Mining and Experance Minerals, the latter is a joint venture with Central Pacific and Southern Pacific.

BP has entered the search by America's Occidental Petra-

Development, 10 per cent, California Asiatic Oil, 10 per

cent and BP Petroleum Develop-

ment Australia, 10 per cent.

tenm, in conjunction with Bolivia's national oil company, Vacimientoe Petroliferors Fiscales Bolivanos is to develop the Porvenir gas and condensate field in south eastern Bolivia. The field, which was discovered hy Occidental in 1978, could con-tain as much as 380m to 500m cubic feet of gas, according to Occidental Boliviana will oper-

ate the field and, along with Canadian Occidental, will rereceive 50 per cent of the gas

and condensate sold after payment of taxes.

Occidental will sell its thare of liquid production to the national oil company at world market prices. Production will reach 8,000 barrels a day of oillike condensate, which will be recovered from 100m cubic feet of gas a day. The gas will be reinjected into the field and sold Following the drilling of the at a later date.

£000 s

(436) 46

INDUSTRIAL DOOR MANUFACTURERS

RESULTS FOR THE YEAR ENDED 31st MARCH 1980 Group Net Profit Before Tex Deferred Tax written back (Credit)

Add Extraordinary Credits Dividends Paid and Proposed The Forty-Fifth Annual General Meeting of BRADY INDUSTRIES LIMITED will be held on 18th Meeting . September 1980 in Manchester.

The following is an extract from the circulated statement of the Chairman, Mr. A. E. Ross Seymour:-

The results for the year to 31st March 1980 showed a distinct improvement on those of last year, despite the effects of the Engineers' national strike and overtime ban. Following the completion of certain rationalisation programmes, the profits of the Door and Engineering Division had moved ahead. The Merchanting Division had a satisfactory year, but due to increased competition the Graphic production Division results were disappointing. The Trans-

port Division produced excellent results. A final dividend for the year of 2.75p per Ordinary and Ordinary A Share is proposed, which together with the interim dividend of 1.50p per share net paid on 16th January 1980, made 4.25p per share net for the year.

As to future prospects we can only be cautious, bearing in mind the fairly general slowdown of the economy.

M. J. H. Nightingale & Co. Limited

27/28 Lovat Lane London EC3R 8EB -1 3.8 +3 9.7 -1 5.0 -1 15.3 +2 5.0 -1 1.0 -2 18.8 -1 7.9 +5 31.3 -1 5.1 Company
Airsprung
Armitege and Rhodes...
Bardon Hill
County Cars 10.7% Pt.
Oaborah Ord...
Frank Horsell
Freddrick Parker 12.8 3.11 18.1 1.41 5.7 6.41 20.7 6.4 10.7 6.3 10.7 6.3 15.3 3.9 15.3 3.2 18.7 4 7.7 3.2 18.5 10.0 10.2 4 6.8 3.71 111111 15.0 3.0 8.0 5.7 12.1 7.4 17.6

FINANCE FOR INDUSTRY TERM DEPOSITS Deposits of £1,000-£50,000 accepted for fixed terms of \$10 years. Interest paid gross, half-yearly. Rates for deposits received not later than 29.8.80. Terms (years) 3 4 5 Interest % 13 13 13 13 13 13 13 Deposits to and further information from The Chief Cashier Finance for Industry Limited, 91 Waterloo Road, London, SE1 SXP (01-928 7822, Ext. 367). Cheques payable to "Bank of England, a/c FFL." FFI is the holding company for ICEC, and FC1.

This edvertisement is issued in compliance with the requirements of the Council of The Stock Exchange, it does not constitute an invitation to the public to subscribe for of to purchase any shares in the capital of the Company.



FOSECO MINSEP LIMITED

(Incorporated in England under the Companies Act 1929, Registered No. 383505)

Issue of up to 1,505,000 8½ per cent. Convertible Redeemable Cumulative Second Preferance Shares of £1 each fully paid

The 8½ per cent. Convertible Redeemable Cumulative Second Preference Shares have been admitted to the Official List by the Council of The Stock Exchange. Particulars of the Shares are available in the statistical services of Extel Statistical Services Limited and copies may be obtained during normal business hours up to and including 9th September, 1980 from:-

Grenfell and Colegrave 55-61 Moorgate, London EC2R 6DR

N. M. Rothschild & Sons Limited New Court. St. Swithin's Lane, London EC4P 4DU

FOSECO MINSEP LIMITED (Incorporated in England under the Companies Act 1929; Registered No. 383505)

Issue of up to £1,505,000 10 per cent. Convertible Unsecured Loan Stock 1990/95

The 10 par cant. Convartible Unsecured Loan Stock 1990/95 has been admitted to the Official List by the Council of Tha Stock Exchange. Particulars of the Stock are available in the statistical services of Extel Statistical Services Limited and copies may be obtained during normal business hours up to and including 9th Septamber, 1980 from:-

Grenfell and Colegrave 55-61 Moorgate, London EC2R 6DR

Turnover

Trading profit

Profit before taxation

Dividend per Ordinary share

Profit after taxation

N. M. Rothschild & Sona Limited New Court. St. Swithin's Lana, London EC4P 4DU

12,000

8.750

6.3484

7.926

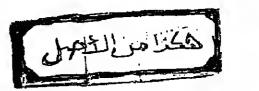
7.625

5.617

12.750

10.000

9.146



Price

100

100

1004

100

100] 99]

100

100

99.05

7¥

124

Blyth Eastman Paine

Citicorp Intl.

Citicorp Inti.

Chemical Ban

Deutsche Bank

Deutsche Bank

Credit Suiss

Securities

Nederlandsche

Yamaichi Securities

BY DAVID LASCELLES

SBC

DG Bank

CURRENT INTERNATIONAL BOND ISSUES

INTERNATIONAL BONDS

BY PETER MONTAGNON

Deposit rates cast a damper

TO JUDGE by the opinion of dealers in London marked Eurobankers, the U.S. can never boods down. True, there was get anything right. First there was too little recession, then following the Volcker monetary package in March too much. Now, if the latest economic data is anything to go by, there's too little recession again.

Over the past teo days the bend market has been forced for digest a new surge in money supply, poor wholesale price figures, and a strong recovery of durable goods orders.

This, coupled with some other recent indicators, has been enough to suggest to many observers that the U.S. recession may already be on the way out before inflation is overcome. The result, inevitably, was an upin short-term dollar interest rates which as the chart shows grew steeper as the last week progressed.

Six-month Eurodollars closed last Friday at 11th points compared with 1018 points a week earlier. The movement is the key to developments in all sectors of the international bond market last week. Nagging second thoughts emerged about where the international interest rate structure is really headed. For dollar Eurobonds this was translated into a marked slip-page in prices. There was no York market lurched lower,

are poised to move up further

already excluded; it is fully

underwritten and Siderbras is

one of the more attractive

borrowers in that it does offer

some collateral business. The amount, moreover, is not large.

-What bankers will be watch-

ing; bowever, is the amount of

Whether they are right

CREDITS

intermittent professional shortcovering, but a technical reaction oo Thursday was short-lived and average prices shed 11 points on the week.

Even at their present levels yields do not seem high enough to attract institutional investors back into the market. The window for straight dollar issues in the Eorobond market was closed all week, although some hankers wondered whether Friday's freak improvement in the U.S. retail price inflation figures might bring a long enough respite for some intrepid borrower to come to market.

.Two issues already in the market were caught up in the deterioration of sentiment. Alcoa's deferred payment bonds slipped badly during the week to be quoted at around 212 on Friday. Clearly not all the bonds were firmly placed, despite the issue's bopeful start.

bankers CSFB, it must be said that this was in large measure due to the change in market spicuoua assessment of the interest rate The U.S. insurance company trend. The deferred payment INA was also forced to face the issue is a speculative one, as it facts. The amount of its conallowa investors to look into a vertible issue was cut to \$50m

In the first place Brazil has conspicuously failed so far to

come to grips with inflation and

the trade balance remains

ebb both domestically and inter-

nationally. For the banks this is an important point. No one

expects Brazil to solve its

mammoth economic problems overnight, but banks do look

for some reassurance that

economic policy is in firm hands

SPREADS are rising inexorably cent level. Bankers are reluctant

for Brazilian borrowers. The to prejudice the outcome of the latest offering, a \$150m credit credit by auggesting that this for Siderbras, already bears a will in fact be the case, but a

margin of 11 per cent, the note of deep unease now runs

blghest seen on public sector through their comments on debt this year, and many Brazil'a debt situation. bankers believe that margins. In the first place Brazil has

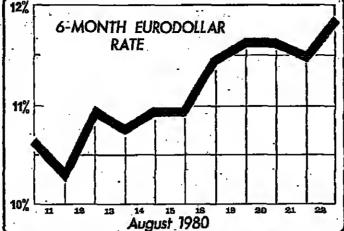
depends heavily on the result beavily in the red.
of of the Siderbras loan in Also, confidence in Brazil's syndication. The chance of a Planning Minister, Prof. Antonio

major setback for this credit is Delfim Netto, is now at a low

the sell-down. If it is low, at and moving in the right general

say around 20 per cent, there direction.
is no chance of Brazil managing. In the short term, considerto hold margins at the 11 per able confusion is being

To be fair to Alcoa and its



rising again.

The problem was compounded

inconsistent attitude of the Central Bank. The Siderbras deal Itself was boro amid con-

siderable uncertainty over when

and whether authorisation from the Central Bank would be

Orion. In hoth cases the Central Bank clamped down on the deals

when it became clear that mar-

ket spreads were moving above

It does seem that Brazil does not now wish to force the

market with a jumbo credit, but with banks increasingly

anxious over the country's.

Development

granted.

Interamerican

14 per cent.

issue manager Blythe Eastman stomach when they might be Paine Webber. Even after this. it was quoted late on Friday at about 97f, well below the issue If the rise in U.S. dollar rates

undermined the dollar sector of the bond market, it also dashed hopes in Germany for easier central bank money. The Bundesbank's meeting on Thursday had been anticipated as a possible opportunity for a cut in official interest rates now that the German economy is also slowing. But the Bundesbank

dollar to rise against the mark. This left it little room to manoeuvre last Thursday and, with no effective change in policy, DM Eurobonds shed point during the week as a whole. German bankers still expect rates to ease between now and the end of the year, though the timing has become less certain. Meaowbile the market is now faced with a spate of new issues this week which may not prove all that easy to digest.

A similar situation prevails in Switzerland, where foreign bonds fell 11 points during the week. Here the international market has falleo uoder the abadow of an even weaker domestic bond market which is wrestling with high short-term interest rates and a negative yield curve. Nooetheless, Bayer was able to launch last week bond yielding 5.19 per cent, the lowest primary yield seen in this market since January.

In the Samurai market meanwhile. Argentina is raising Y20hn over ten years with a coupon of 8.8 per cent and an issue price of Y99.05. Lead manager is Yamaichi and the details were set on Friday after a day's delay to iron out slight differences with the borrower on the coupon which at one atage looked set to be 8.9 per cent.

BY PETER MONTAGNON

Uncertainty over money supply ALL EYES will be on the Fed factors were at work which from the market rather than its this week as the market tries to would be cancelled out later interventions, suggesting that it

* Not yet priced. ‡ Final terms. ** Piscement. † Floating rate note. †† Registered with U.S. Securities and Exchange Commission Note; Yielde are calculated on AIBD bear

this week as the market tries to gauge the reaction to the recent surge in the money supply. Some people fear the central bank will bave no choice hut to tighten the credit relns, even at the risk of suffocating what could be the start of the eco-nomic recovery. Others are less troubled. They point out that the week-by-week ups and downs of the money supply figures are not a reliable guida, and that the Fed will probably prefer to play it cool for a while until the outlook becomes

Borrowers

U.S. DOLLARS tAlcoa of Australia

telNA O'seas Fin. NV

ttBanco de Santiago

†Fuqua O'seas Fin, NV

*Renault Acceptances

Kingdom of Sweden

‡ Bayer Intl. Fin. NY 100 ‡**Mitsubish Heavy Inds. 100

CANADIAN DOLLARS

Bank (G'teed Japan) 100

Hapan Development

SWISS FRANCS

Bankmont Realty

GUILDERS

Rapublic of

U.S. BONDS

1**Nederlansche

YEN

(Chile)

D-MARKS

World Bank

5 Nichii

#Stand. Bnk of S. Africa 50

m.

Maturity

1990

1987

Although last week's money supply figures showed a sharp drop of \$3bn or more in the two main definitions, MIA and MIB. this was disappointing for a couple of reasons. One, the drop did not begin to compeosate for the shocking \$8hn plus rise the week before, which the market had only been able to accept because experts said special

clearer.

U.S. INTEREST RATES (%)

Week to Week to Aug. 22 Aug. 15 ederal Funds wkly.

Second, last week'a figures also included an upward revision of the previous week's rise, so the

net decline was even smaller. The result is that money supply is growing at about twice the Fed's short term target rate of 7-8 per cent, And while the Fed is willing to allow a small acceleration to compensate for the slump in the money supply earlier this summer, there are worries that the spurt could get out of hand if the economy recovers too quickly too soon.

Symptomatic of the nervousness on Wall Street was the sharp rise in interest rates at the end of last week, and the per cent increase in the prime rate to 111 per cent, its first general rise since it went into its cyclical decline in April, This rebound is due entirely to the higher cost of funds: loan demand is only picking up

Thus far, the Fed seems to bave been content to let interest rates rise by themselves. Last week, it stood back from the Fed funds market and allowed the rate to move into the 10 per cent range. Precloser to 9 per cent. Thus the

Fed was notable for its absence

is prepared to accommodate a

Uniess there is a sharp decline in the next week or ao, there will probably be another Certificates of deposit, which provide a useful guide to prime rate trends, rose sharply last remain high in the early part of this week.

The threat of a new surge in interest rates has sent corporate and municipal treasurers scurrying to the bond market for funds. This week's slate is a huge \$1.3bn matching the volume reached at the height of the hond market surge a couple of months back. The treasury is to auction \$3bn of five-year notes tomorrow, and 6bn of short-term bills on Friday.

The most eye-catching statistic this week will be Friday's leading economic indicators report for July. In June this index jumped 2.5 per cent, prompting expectations that the recovery is on its way. However, it is still an open question whether the economy is already at the start of a sustained recovery rather than just bouncing around at the bottom

look set to fall but hard to

hy the issue pricing. A coupon of 12 per cent was below market even when the issue was announced. Had Alcoa paid a market rate of more like 12; per cent the slippage might well have been much less con-

coupon of 12 per cent next from \$60m and the coupon is still running scared of infla-January. This is fine when rates raised to 81 from 81 per cent by tion and does not want the

Market hardens against Brazil generated by the apparently ability to meet its 1981 financ- able amount of Argentinian ing requirements, Brazil needs to offer more on margins. Without this, bankers say, funds may dry up sooner rather than

Another country which faces

an uphill task in meeting its Since then the Central Bank borrowing needs is Yugoslavia. has apparently got cold feet about a possible floating spread deal for Empresa Brasileiras de Transportes Urhanos as well as a \$70m co-financing with the Interamentary Provident Description offered to major international banks. Accordingly the amount Bank being tested in the market was scaled down to \$200m by for Centrals Mioerals Gerals by the maodated bank Kuwait Orlon. In both cases the Central Foreign Trade Contracting and Investment Co.

Response to the Republic of Argentina's current \$250m, eight-year credit has been some what lukewarm. This is mainly due to the tight pricing of the deal which incorporates a split margin of 1-3 over eight years. There bas been a consider-

country seem set to continue at a fairly rapid pace. A large loan is expected from the oil concern YPF which is almost certain to carry a higher margin than the Republic financing. At the same time this borrower offers attractive collateral business. Banco de la Nacion is also expected to award shortly a

paper in the market recently

and horrowings from this

mandate for some \$150m to a Japanese bank, This follows hard on the signing of its latest \$350m credit last Wednesday, Italy's regional development agency, Isveimer, meanwhile, is

raising \$100m over seven years at a margin of } per cent throughout. Lead manager is Banca Commerciale Italiana. while Societe Europeenne de Banque is acting as agent and running the books.

NEW ISSUE

FT INTERNATIONAL BOND SERVICE

	4.44			. ".:		· ·	·
U.S. DOL	t AD				Change	. 00	
STRAIGHT		Issued	DIA I	Offer	day, w	ank Y	intel :
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DEUTSCHI	MARK			. 0	hange	on	

•	Average price chan	ges 0	n day	-0r	OU M	ook —	75 .	
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	BFCE 74 87	100	100	100%	-04	0	7.66	
	RECE St. 95	יטור	100%	100'	-03	-04	8.00	
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	ŒC 77 94		993	100%	-04	+0%	7.96	
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•	Kobe, City of 74 89		951	961	+0%	− 0%	7.77	
٠.	-Kobe, City of 8 90		997	100%	-04	-0-	7.98	
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	Semen. City of 4½ 91	40	193	22,2	-04 -04	_41	5 69	
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	BNOE 5 89	75	823	23,4	+02		5 D4	
	BMW Overseas 44 97	100	934	33 ²)	-02	TU'6	B 29	

Average price changes	On day 0 on wask -02
WISS FRANC	
TRAIGHTS Issued	Bid Offer day wook Yield
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sergen, city of a so	823, 891, -03, -14 7.70
NOE 5 8975	931 931 +02 +0% 5.04
MW Overseas 44 91 100	104 1042 -03 -13 8.39
tuhrm'n-Tamarode 7 90 40	104 1042 -01 -11 5.55
Calago Net. Tels. 4% 89 100	94 942 -01 -01 5.19
Conambanes 4's 91 60	87-2 88 -01, -01, 6.05
ouncil of Eur. 5 89 100.	. Q45. 950'0'- 0./3
enmark 54 90 80	007, 1003, +04, -04, b./a
CHIMICIA VA VV	97 97 +0 -0 5.72
10 41 04	Q4 940 - D1 - O1 5.20
Idi. de Ligitos -	-1021 104 - 05 - 02 5.48 . I
G. 7. 117po. pm. 0 44	88 89 -04 -2 5.87
ZB 41, 89 100	194 941, 0 -01, 4.93
lifti 44 81	794 947 0 07 7.55
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ntAmer. Dev. 7 90 : 80	105 105 0 -1 6.26
uslend Tels. 5 2 90 50.	981 981 +001 5.70
Aplaysia 5 89	. 221 283 +05 -05 b./4
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100011 161. 0 1	95, 95, +0, -3, 5.65
	189 891, -01, -21, 5.70
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	88 807 2 31 5.96
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slo. City of 4% 97: IUV	188 881 -01 -1 5.84
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Yorld Bank 43 88 150	
11	X/5 00 - 12 - 3 4
AOUN BOUK 4.5 31 100	on day -015 on week -114
Average price changes u	MI fres of an experience

	Change on
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A	XXIA XYA U TUTI DADI
CID 71. DO	962 974 -05 +05 8.23
Figure E 0 97	917-927 0 -01 0.02
Finland 5.8 86 10	88L 89L 0 +0'2 8.87
Finland Rep. of 8% 87 15 -	97 98 0 +04 B.84
Average price changes Or	day 0 on week +01

H, 8k. Canada 10 88 C\$ 40 92½ 92½ -0½ +0½ 1 Tordom Cpn. 13½ 86 C\$ 30 †101½ 102 +0½ -0½ 1	ield 2.37
OTHER STRAIGHTS Issued Bid Offer day week Y Belf Canade 104, 88 CS 60 93 931, -014, -015 1 C18C 137, 85 CS 50 17071, 102 0 -075 1 C18C 1112, 85 CS 50 1951; 96 0 -074 1 Federal Over, 1113, 90 CS 60 1951; 96 0 -074 1 Fat. Can. Inv. 10 84 CS 50 1522; 93 +075 -075 1 GMAC 12 85 CS 50 1971; 98 0 0 1 R, 8k. Canada 10 86 CS 40 923; 923, -074 +075 1 Tordom Can. 132, 86 CS 30 17071; 102 +045 -075 1	ield 2.37
### Canada 10% 88 C\$ 60 93 93% - 0% - 0% 1 C/8C 13% 85 C\$	2.37
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Fat. Can. Inv. 10 84 CS 50 1524 93 +04 -04 1 GMAC 12 85 CS	
GMAC 12 85 CS 50 †97½ 98 0 0 1 R. 8k. Canada 10 80 CS 40 92½ 92½ 92½ —0½ +0½ 1 Tordom Con. 13½ 86 CS 30 †101½ 102 +0½ —0½ 1	2.07
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	0.20
	25.0
	3.3V 8 4E
	1 10
	99
	3,13
	9.22
	9.38
Philips Lampa 84, 84 Ft 75 963, 97 +04, 0 Air France 11 84 FFr 120 983, 973 0 -03, 1	
CECA 144, 88 FFr 150 1054 1067, -04 -05 1	
Finland 11 84 FFr 80 954 964 -04 -04 1	7 39
	2.63
Finland 11 2 89 FFr 70 93 34 34 0 -04 1 Gaz de France 11 84 FFr 150 954 964 0 -04 1	7 29
ISM France 117, 84 FFr 120 97 98 -01, -01, 1	. 61
Renault 94 85 FFr 100 884 894 0 +04 T	
Saint-Gobain 94 88 FFr 130 874 884 -04 +04 1	291
Solvey et Cie 93 87 FFr 125 853 863 0 +03 1	
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aenescial Fin. 14's 90 £ 20 98's 99 0 +0's 1	.46
Citicorp O/S 1312 90 £ 50 977, 982, -02, -03, T	3.89
EIB 111 91 E 25 91 911 -04 +04 1	1.03
Fin. for Ind. 121 89 E 30 951 98 -01 -01.1	3.33
Fin. lor Ind. 14' 88 £ 20 101 101': -0' -0' 1	1.17
Paugeot SA 14 90 £ 23 981 987 -01 -01 1	L.2 8
Sweet Ev Cr 151, 85 E 20 1024 7034 -04 U T	1.22
Sanchres 80- 90 KO 7 1941 947 0 -04	3, 10
CCCE 91 91 KO 10 1944 394 U TV3	
Sanatrach 81- 90 KO 12 1931 935 0 -11-	
Akro 94 87 LuxFr 500 944 854 -04 -051	
Furnism 8 87 furfr 500 894 904 0 0 10	
Furators 9% 88 LuxFr 500 98% 99% -0% 0	
Fig 93, 88 Luxfr 500 984 984 +03 0	F88
Volvo 94 87 LuxFr 500 954 974 -04 -04 10	1,42
FIGATING RATE	

				-			
	FLOATING RATE						
	NOTES S	presd	8id	Offer	C.dta	C.cpri	C.yld
	Allied Irish 8k. 54 87		98		2/1		10.82
	Sank of Ireland 54 89	±01.	973	9874	21/11	113	11.a1
	Sank of Tokyo 54 89	±0°-	96%	273	25/10	16.55	17.07
	Barclays O/S Inv. 5 90	OΔ.	967	973	13/12	32	9.91
	8argen Bk. A/S 8 89	‡0 2	97	974	29/8	10	10.28
	Bilbao Int. NV 54 90	0,4	97			15.05	10.33
	Citicorp O/S F. 83!	5‡0	991		23/8		10.25
٠	Citicorp O/S F. 84	‡O	98	. 991	30/7	9.69	9.80
	C. Itoh 54 87	O3	39,4	98%	18/9	18.44	
	Co-operative Bk. 8 98.	04	98	987	15/11	11.44	9.67
	Creditanstalt 54 a1	540.7	1007	1007	19/10	9.44	12.03
	CNT 54 86	30.5	973	997	1/11	9.91	10.01
	GZB 512 89	107	90	92	23/11	113	12.77
٠,	Jugobanka-8 89	0,			15/10	184	18.80
	Ind. Bank Japan 54 87 Lloyda Eurofin a 90 E		983	967	3/1	15%	16,30
	LTCB Japan 54 86		37		13/12		9.82
	LICO Japan 54 00	. 01	977	981	7/12	1019	10.32
•	LTC8 Japan 5-2 89 Mirs. Han. O/S 5- 94	+01	973	973	31/a	87g	10.14
	Mirs. Han. 0/S 54 94 Midlend Intl. Fin. 5 89	01	97		20/12	91,	9.73
	Midland Intl. Fin. 54 92	02	974	973	5/12	10%	11.15
	Necional Fin. 84 86	O.	97	974 2	5/1	9.63	8.92
	Nat West 5% 84	50°	89	991,	11/10	184	1a.77
	Mippon Credit 64, 86	0,	974		12/1	9.56	9.78
	Nippon Credit 54 87		977	937	6/11	10%	11.08
	Royal Bk Scot 54 94		98	98-	11/10	9.31	9.48
	Hoyal BK SCOI 54 343	07	98		3/10		20.21
	Soc. C. de 8qua. 612 87	62	98%		a/9	17%	17,40
	Standard Chart. 54 90	04	98		15/1	10	10.1B
	Svenska Hndisbk. 5 87		1967	983	18/10		19.38
			987		14/9	1812	18.76
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	Bq. E. d'Alg. 44 89 SF	0.0	~ do	w O a	10/ 12	k -0-	

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	Long term			
Aug. 22 .	91.34	10,37	79.38	11.58
Aug. 15 .	91.79	10.23	80.40	11.37
High '80.	93.58	(1a/6)	89.19	(2/1)
Low '80 .				

608.5 514.3

* No information availableprevious day'a price. † Only one market maker supplied a price.

STRAIGHT BONDS: The yield is the yield to redemption of the mid-price; the amount issued is in millions of currency units except for Yen honds where it is in billions. Change on week= Change over price a week earlier.

FLOATING RATE NOTES: Denominated in dollars unless otherwise indicated. Conpon shown is minimum. Cdte=Date next coupon becomes effective. Spread = Margin above aix month offered rate (t three-month; § above mean rate) for U.S. dollars. C.cpn = The current conpon. Cyld=The current yield.

CONVERTIBLE BONDS: Denominated in dollars unless otherwise indicated. Chg. day= Change on day. Cnv. date=First date for conversion into shares. Cnv. price=Nominal amount of bond per sbare expressed in currency of share at conversion rate fixed at issue. Prem=Percentage premium of the current effective price of acquiring shares via the houd over the most recent price of the shares. The list shows the 200 latest international honds for which an adequate secondary market exists. The prices over the past week were supplied by: Arab Company for Trading Securities SAK; Kredietbank NV: Credit

Commercial de France; "Credit Lyonnais; Commerzbank AG; Deuische Bank AG; Westdentsche Landesbank Girozentrale; Banque Generale du Luxembourg SA; Banque Internationale Luxem bourg; Krediethank Luxembourg; Algemene Bank Nederland NV; Pierson, Heldring and Pierson, Credit Suisse/Swiss Credit Bank Unioo Bank of Switzerland; Akroyd and Smithers; Bankers Trust Intercational; Bondtrade; Credit Commercial de France (Secs.) London; Citicorp Inter-national Bank; Daiwa Europe NV; Deltec Trading Company; Dillon, Read Overseas Corpora-tion; EBC; First Chicago; Goldman Sachs International Corporation; Hambros Bank; IBJ International; Kidder Peahody International; Merrill Lynch; Morgan Stanley International; Nesbitt Thomson; Orion Bank; Salomon Brothers International; Samuel Montagu and Co.; Scan-dinavian Bank; Strauss Turnbuli and Co.; Sumitomo Finance Inter-national; S. G. Warhurg and Co.;

Wood Gundy. Closing prices on August 22 Wardley Ltd.

These securities having been sold, this announcement appears as a matter of record only.

AUGUST 1980

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The Nikko Securities Co., (Europe) Ltd. Nippon Credit International (HK) Ltd. Nippon Kangyo Kakumaru (Europe) Rothschild Bank AG Osakaya Securities Co., Ltd. N.M. Rothschild & Sons Okasan Securities Co., Ltd.

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CURRENCIES, MONEY and GOLD

Liquidity game continues

week, attemptiog to sort out varying liquidity problems that have arisen recently. In Italy, the central bank has been trying to keep domestic credit very tight, thereby not only putting a squeeze on money supply, but also beloing to keep lira rates as attractive as possible, hearing in mind that confidence to the lira has been severely undermined

recently by Italy's economic

performsocs and currency

Companies and Markets

Central banks were particularly devaluation rumours. In the siderably more bills than the active in money markets last money market the Bank of Italy L9 trillion maturing, and this has reduced reserve asset ratios is determined to keep liquidity together with less money to hid from September 1, which is not tight ahead of the month end, with, should ensure that yields seen as a relaxing of the bank's wheo L13 trillion of Treasury remain high and liquidity tight tight monetary policy, but as a bills are on offer. To help achieve this, the hank is refusing to allow current holders of hills the rediscount facility normally employed as a means of raising funds ahead of an auction. Instead holders of bills will have to retain them until August 29. The auction will involve con-

	lug. 92	Aug). 21							
Gold Bullion (fine OUTICE)										
Close	(£2581 ₀ .2593;) 1£272.27314) (£270.1731 1£262,818	8648-645 8641-644 8640-50 \$645,26	1£27034-272) (£2701 ₇ -8713 ₄) (£870.481) (£273,372)							
Gold Coine										
Krugerrand	(£277-278) (£274-14-277-14) (£68-69) (£78-14-8014) (£7814-8014)	\$661.563 \$658.661 \$1621 ₂ .1631 ₂ \$184.186 \$184.186 \$182.164 9795.796 \$625.629 \$758.762	1527812-8801 (\$27712-278121 156812-59141 157712-78151 (\$7712-78121							

THE POUND SPOT AND FORWARD

In Frankfurt the decision to logical step to providing further leave key lending rates un- liquidity on a longer term basia. changed raised only a few eye- and in the short term to counterbrows, and with the immediate the maturing pension securities future looking far from rosy on facility of some DM 5.40m.

Nevertheless the Bundesbank the economic froot, and the Heavy tax and social security recent turnaround in U.S. inter- payments due at the beginning est rates, there seems little of September should ensure that likelihood of an early cut. money remains fairly tight.

OTHER CURRENCIES

Aug. 22	£		5		Note Rates
Argentina Peso Australia Dollar	2.0410-2.0450	0.863	IQ-0.8835	Austria Belglum	\$0.00-30.30 68.90-69.80
Finland Markka Grask Drachme	101,568-104,025	3.868 43.0	5-3,6695 5-43,25	Prance Germany	13.14.13.24 9.85.9.91 4.26.4.29
Hong Kong Dollar Iran Rial Kuwait Oinar(KO)	n.a. ·	4,949	pre- 10-4-2010	Italy	. 631 538
Luxembourg Fro. Malaysia Dollar New Zealand Dir.	68,40-68,50 6,0830-5,0870	88:9 8.148	1-28.83 0-9.1500	Norway Portugal Spain	11.47-11.57
Seudi Arab. Riyal. Singapore Dollar.	7.83-7.89 5.0380-5.0500	3,512	5-3.3210 0-2:1300	Sweden	9.87-9.97 3.92 - 3.951
Sth. African Rand U.A.E. Dirham	8.70-8.78			Yug salavia	

THE DOLLAR SPOT AND FORWARD

												2010/09/2019	
. 22	Day's epread	Close .	Dne month	% p.e.	Three months	% p.s.	Aug. 22	Day's epresd	Close	One month	% p.e.	monum.	% : p.s.
ugel n vay ce dsn n · vie z.	68.13-68.55 13.17-15.22 1.1280-1.1320 4.26-4.29 117.80-118.10 172.90-172.50 2017-2032 11.50-11.54 9.87-9.52 8.91-8.94 527-535 30.15-30.30 5.921-3.9712	2.3655-2.3665 2.7420-2.7430 4.65-4.66 68.40-68.50 13.204-13.214 1.1308-1.1318 4.271-4.281- 117.70-117.90 172.00-172.10 2029-2031 11.511-11.521 9.901-9.911- 9.904-9.911- 9.92-9.93 529-630 20.22-30.27 3.96-3.97	0.10-0.15p die 31-23-pt pm 45c pm-16 dis 55-110c dis 18-21lire dis 67-57-cre pm 3-4c pm 21-13-ore pm 2.20-1.80y pm 19-17-gro pm 47-31-c pm	8.09 7.09 4.38 -0.34 -1.33 8.78 -5.75 -11.53 6.45 3.43 2.34 7.19 11.35	11½-9½ pm 11½-10½ pm 2½-1½ pm 6.00-5.50 pm 39-32 pm 11½-10½ pm	9.27 5.69 3.97 -1.86 -0.44 · 7.94 -0.08 -6.86 -13.69 4.34 0.73	W. Ger. Portugel Spain Italy Norway Fmnce Sweden Jepan Austrip Switz.	1.8029-1.8100 49.70-49.90 72.70-72.83 857.50-858.45 4.8650-4.8745 4.1770-4.1900 4.1926-4.1965 223.50-226.30 12.7812-12.7812 1.6630-1.6760	1.6745-1.6756	70-90c dis 13-16ire dis 0,10 ore 0,40 dis 0,20-0,30c dis 1,50-1,85ore dis 0,45-0,60y dis par-0,75gro dis 0,70-0,65c pm	5.73 0.82 0.61 -1.35 -7.85 2.16 -13.18 -20,28 -0.37 -0.72 -2.81 -2.81 -0.35 4.83	8.50-10 dis 1.25-1.20 pm 40-90 dis 205-235 <i>dis</i> 40-44 dis 1.60-2.00dis 0.65-0.30dis 0.55-0.30dis 0.30-0.45dis 0.35-2.30 pm	5.4887.22.08 - 5.208 - 1.189.7.22.08 - 1.189.7
· Si	lgion rate is I c-month lorwar	or cenvertible d dellar 4.77-4	Irance. Finencie 1.67c pm, 12-m	el frenc onth 6.8	69.35-69.45. 0-6.70c pra.		† UK disco	and Ireland a unts epply to	the U.S. dolla	J.B. currancy. Por end not to the	individ	nai causica branilums su	

FT LONDON INTERBANK FIXING (11.00 a.m, AUGUST 22)

LOILD	014 1777 10112			
. 5 months	U.S. dollara	6 months (i,8. dollars	The fixing rates are the arithmetic means, rounded to the nearest one-soutenth the bid and offered rates for \$10m quoted by the market to five reference bank
bid 11 ör8	offer 11 1/2	bid 11 13 19 offor 11 13 18		 11 am each working day. The banks are National Westminster Bank, Bank Tokyo, Deutsche Bank, Banque Nationale de Paris, and Morgan Guaranty, Ty

EURO-CURRENCY INTEREST RATES (Market Closing Rates) Italian Lira Asian 8 Aug. 22 U.S. Dolfer Dirtch Gullder Swiss France Franch Franc 13.131g of 1414.1412 1234.13.16 121g 123gC 1114.111ggi 10.101cp 81₂·101₂ 81₂·101₂ 85₈·10 101₄·105₈ 107₈·111₄ 111₈·111₂ 104-1012 104-1012 104-1012 104-1012 1010-1038 10-1014 14-18 25-28 514-333 414.434 10.1015 5-2.5-5 334-512 5-6-534 556-516 tShort term.. B14 B&

Long-term Eurodollar two years 12½-12½ per cent; three years 12½-12½ per cent; four years 12½-12½ per cent; five years 12½-12½ per cent nominal closing rates. Short-term rates are cell for starting, U.S. dollars, Canadian dollare and Jepanese yen; others two-days' notice. Asien rates are closing rates in Singapore. The fallowing nominal rates were qualed for London dollar certificates of deposit; one-menth 10,30-10.40 per cent; three-months 10.75-10.85 per cent; six manufacture.

LONDON MONEY RATES

) 1	Aug. 22 1980	Sterling Gertificate of daposit	Interbank		Local Auth. negotiable bonds	House	Company Doposits		Treasury	Eligibie Bank Bills &	Fine Trade Bills
	Overnight 2 days notice 7 days or 7 days notice Dne month Two months Three months Six monthe Nine monthe One Year Two years	167g 165a 1834 161a 165c 161a 154c 154d 154c 154d	1612-18 1714-1712 1676-17 1514-1514 1616-1614 15-1614 15-1614 15-1614	1714-1719 1714-1756 1656-17 1656 1576-16 1431-1419 1436-1414	1736.1758 1712.1731 17.1712 1512.16 1556.16 1556.16	17½ 17¼ 17¼ 1719 17 1612 1579	1746-1712	153g	148-144 144 144 144 144 144 144 144 144 144		167 165 161 161
ı	_ 						والمراجع المستواد	بمحمد جيفات	مسرب سيخت	سرح المستقد	

Local surhousty and finance houses seven days' notice, others seven days' fixed. Long-larm local authority mortgage rates nominally three years 14-14% per cent; four years 14-14% per cent; five years 14 per cent. © Benk bill rates in table see buying rates let primts paper. Buying rates for feur-menth bank bills 15% per cent; Jour-month trade bills

Apploximers selling rete for one-month Treasury bills 1423₂₂ 1423₂₂ per cent; two-months 1423₂₄-1423₂₂ per cent; two-months 1423₂₄ per cent; two-months 1634 per cent; two-months 1634 per cent; two-months 1634 per cent; three-months 1523₂₄-1523₂₄ per cent; ene-month tradd bills 1634 per cent; two-months 1634 per cent; ene-month tradd bills 1634 per cent; two-months 1634 per cent; end threenence Houses Base Retes (published by the Finance Houses Association) 16½ per cent from 'August 1, 1980.

Bank Deposit Retes for sums at seven days' notice 14 per cent. Clearing Bank Rates for lending 18 per cent.

Billis: Auerago lender rates at discount 14,8005 per cent.

Gabon C.F.A. Franc Gamble (5) Dajasi

Gamble (5) Ostmark
Germeny/East: Ostmark
Oermeny (Wostr. Deutsche Mark
Ghano (5) Cedi
Gibreltar (K), Gibraltar £

The table below gives the latest except where they are shown to be usualiable rate of exchange for the otherwise. In some cases melket rates pound except various currencies on have been calculated from those of August 22, 1980. In some cases rates to which they are member of the etatling area other than are naminal. Market rates are the selling rates.

Abbreviations: (A) approximate rate.

Abbreviations: (A) approximate rate.

11.52

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CURRENCY RATES

Bank Special - EuroDeen rate Drawing Currency. Rights Unit

TW YC

May 19 ---. 39_{10. 55}

Acc. 3::

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2,1575

10,72(56)

Italian Lire

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Western Samoa 3. Samoan Tale

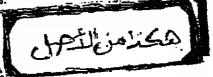
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٠,	Brit. Virgin Isles (S) U.S. S	3,3660	Jordan (8) Jordan Dinar	0.680(eg)	Soycholies	14.85(sg)
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}}			Korea (Nth) Won Korea (8th) Won	2.68(II)	South Africa (\$1 Rand South West African	- 1.7975
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ıl	Colombia C. Peso	(F) 113.71		-	Swazland (S) Lilengoni	4.2850 1.7975
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1	Rilboutt Fr.	402 (sg)	Mauritius (5) M. Rupeo		Tunisia	0',943 (9G)
П	Ocminica (B E. Caribbean S Dominican Repub. Dominican Poso	6,40	Mexicon Peso	54,54	Turkey	. 186.40°
1	Dominican Repub. Dominican Poso	2.3660	Miquolon C.F.A. Franc Monaco Frongh Franc	495.5	Tuvalu Australian \$	2.5600 2.0430
ĺ		I(O) S9.36	MongolloTugrik	9.91 (a)6,74(li)	UDANCE (S)	17.07
ı	Ecuador Sucre	iF) 64.51	Montserrat, E. Caribbean 9	5, 40	United States U.S. Dollar	2.7660
1	Egypt £gyptian £	(U) 1.65	Morocco Dirham	8.g8(sg)	Limitation	1(cmi21,68
1	Equetorial Guinea, Ekpwalo	172,05	Mozambiquo Metical	87.05	Uruguay Uruguay Peso	(fr/21.68
ı	Ethiopio Ethiopian 81rr	(P) 4.86 60	Nauru Australian Dellar		Utd.Arab Emirates U.A.E. Dirbam	0.773
I	Folkland Islande(S) Falkland Is, £	1.0	Nepal Nepelese Rupes	2,0430 28,40	Unper Volta	1,5167
Ţ	Feroe lelands Danish Krono	13,2076	Netherlands Guilder	4.655	C.F.A Franc	495.5
١	Fiji lelende Fiji 5	1,2125	Nethorland Antilles Antillion Guildor	4.2550	Vanuatu Franc	156(80)
ł	Finland Markka	g,6g6	New Nebrides See VANUATU		Vettoen / Aust Dollar -	7,0430
ı	France French Franc	9.91	TATOMINIOUS TRAINAIU		Vetican Italian Lire	2:030.0

*That cert of the French community in Africa formarly Finneh Weet Africa or French Equatorial Africa. † Rupese per pound. † General rates of oil and free exports 99.35. **Rate is not based on 2 Berbados \$ to the dollar. †Now one official rates of oil and free Apolicable on ell fransactions accost conflicts having a bilatoral agreement with Egypt, and who am not members of IMF. (1) Based on green rates agreement oxports and imports. (2) Parallel rate for non-government transactions and oxports and imports.

Now Zealond (5)... N. Z. Dollar

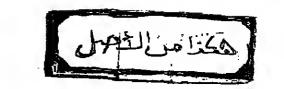
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9,91 174 Isgi

495,5 4,0 4,28 4,28 6,51 1,0 102,797

WORLD STOCK MARKETS



	Companies :	and Market			· .			WO	KLD	SIC) (
	NEW YO		Stock Columbia Gas	Aug. Aug. 22 21	-	Aug. Aug. 22 21		Aug, Aug 22 21	-		ig.
	ACF Indestries. AMF Intil ARA. AMF Intil ARA. AVX Corp. Abbotts Laba. Acras Oleve. Adobo Oli & Gas Actas Lifs & Gas Antarison (H.F. Ali Prod & Chen Alzona. Albary In' I Alberto Cully. Aller Chemical. Alise Chemical. Alise Chemical. Alise Chemical. Am Barrada Hess. Am. Archer Barnida. Am. Can. Am. Express. Am. Hoist & Ilk. Am. Stores. Am. Stores. Am. Stores. Am. Cully. Am. Stores. Am. Stores. Am. Cully. Am. Moders. Am. Stores. Am. Cully. Am. Moders. Am. Cully. Am. Moders. Am. Cully. Am. Moders. Am. Stores. Am. Cully. Am. Moders. Am. Cully. Am. Moders. Am. Cully. Am. Moders. Am. Express Am. Cully. Am. Moders. Am.	Aug. Aug. 21 324 21 324 21 324 21 324 21 324 21 325 3456 326 3456 326 3456 326 3456 326 3456 326 3456 326 3456 327 3514 3214 2114 3214 2114 3214 331 3214 3216	Btock Columbia Gas Columbia Pict Combined Int. Combustn, Eq. Combustn, Eq. Combustn, Eq. Compustn, Eq. Comp. 20ionc Comp. 20ionc Cong. 20ionc Cons Hat Gas. Cons Hat Gas. Cong. 20ionc Conti Jine. Conti Jine. Coors Adol Ph. Copeland Copper Inds. Coors Adol Ph. Copeland Corping Glass. Corron Black Cox Broadcas Crane. Coron Zell. Curmins Eng Curtisa-Wight Ilamon Dana. Dart Inds. Darta Gen. Coron Relack Coron	32 35 35 35 35 35 35 35	Gt. Atl. Pac. 1 Dt. Basins Pet Gt. Mth. Heko Gt. Wast Finz Greyhound Grumman. Guif & Wester Oulf Oli. Hall (FB). Halliburton. Hammormill P Handleman Hanna Mining Harourt Brac Harnisohlego Harris Corp. Harris Corp. Harsoo. Necia Mining. Helisr Inti. He revules Nershey Helisr Inti. Her Inti. Her Routet Pkd. Hilton Hotels Hitachi Hobart Corp. Holiday Inns. Holly Sugar Homestaka Heneywell. Hoover Univi Hermel Geo. Hoover Univi Hermel Geo. Hospital Corp. Housebold Fin Heuston Inds. Housebold Fin Heuston Right Henston Qil Housebold Fin Heuston Inds. Housebold Fin Heuston Qil Henston Qil Henston (EF). Nuyok. Int. Pacellica Interiace Interiace Interiace Interiace Int. Flavours Inf. Harvestor. Int. Rectifier Int. Flavours Inf. Harvestor. Int. Paper Int. Moutificod Int. Paper Int. Rectifier Int. Tel & Tel. Iowa Best Iving Bank. Iames [F9] Jeffin Pilot Jemson Contr Johnson Contr Johnson Contr Johnson Contr Johnson Contr Johnson Red Kaiser Stael Kaiser Stael Kaiser Stael Kaiser Stael Konnamstal Kern-MeGeo Kidde Kimberley-Cik King's Dept. St	Call	Mesa Petroleum Mesa Metromadia. Metromadia. Mitton & Radiey. Minnesota MM. Missouri Pac. Missouri Pac. Mobern Merch, Monsanto. Menerch M/T. Monsanto. Menerch M/T. Monsanto. Menerch M/T. Monsanto. Menerch M/T. Morgan (JPI. Motorola. Murphy (GC). Murphy (GC). Murphy (GC). Murphy (GC). Murphy (GC). Murphy (GC). Murphy (GL). Natica Can. Nat. Can. Nat. Can. Nat. Medical Er Hat. 20micduct Hat. Gorvice Ind. Hat. Stranderd. Hat. Stranderd. Hat. Stranderd. Hat. Stranderd. Hat. Stranderd. Hat. Stranderd. Natomas. HCN8. NCR. Hew England El Naw Eng. Tel. NY fitnes & G. NY Times. Newment Minin Miag. Mehewk. NICOR Inc. NICOR	Aug. Aug. 221 Aug. 21 5434 5514 733 5434 5514 733 5434 5514 733 5434 5514 733 5434 5514 733 4514 457 4514 45	Sehlitz Srew J Schlumberger Scott. Sch Scott. Separ. Scott	Aus. 22 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	17. 14. 14. 14. 14. 14. 14. 14. 14. 14. 14
CLEFEN	Ball & Howell Sell Industries Bendix Beneficial Both Steel Sig Three Inds	2216 2224 1316 4834 2256	Enserch Envirotech Esmark Ethyl Evans Prode	3814 3864 1179 664 1179 664 1179 664 50 50 50 50 50 50 50 50 50 50 50 50 50	Kay Gorp Koliogg Konnecott Gpr Konnamstal Kerr-McGeo Kidde	95 22 9012 2066 2914 2814 7812 7214 7812 7112 7112 1103 1103 1103 1103 1103 1103 1103 1103 1103 1103 1103 1103 1103 1103 11	Perkin-Elmer Petrie Stores Patrolane Prizer Phelps Dodge Phila, Elect Philip Morris Philip Pet Pilisbury Plenser Corp Pitney-Bowes Pitstoh Pranning Risch Plessey Potaroid Potlateh Prentice-Heil Prenter Gamble Pub. Sorv. E & C Pub. S. Indiana Pulman Purex Purolator Quaker Oets Quenax Questor Risch Purina Rameda Inns Rank Drg ADR. Pautnen	3934 6012 32 32 4014 4114 354 4914 354 4914 354 4914 3554 356 4914 3554 3554 3554 3554 3554 3554 3554 35	Transamerica. Trans Union. Trans Werid. Trans Werid. Trans Werid. Trans Werid. Trans Werid. Trans Werid. Triton Dil Gas. 20th Cent. Fox Tyler. UMC Inds. UNIC Inds. Union Camp. Union Carbide. Union Camp. Union Pacific. Us State Us S	354 355 356	12 4
¥D	CBS	2556 9 9234 1849 1878 43 3759 60 30 55 36 30 55 36 36 2056 36 5678 5558 5678 5558 16678 5574 1386 1784 2778 1785 16 1875 16 1876 16 18	Florida Pwr & L Ford Motor Foremost Mek. Foster Wholes Foxbore Franklin Mint- Fresport Mini. Gan Fresport Gamble-Skogn Gannett Gen Gannett Gen Gannett Gen Exploratio Gen Exploratio Gen Exploratio Gen Foods Gen Motors Gen Portland Gen Reinsce Gen Reinsce Gen Reinsce Gen Reinsce Gen Reinsce Gen Reinsce Gen Talep Elec	2734 2864 3054 4014 459 1614 1714 3074 1714 1714 1714 1714 1714 1714 1714 1	Louisiana Pag- Lowenstein Librizol Lucky Strs Macke	7054 7054 705 73 1819 1674 484 4614 1514 1514 1514 1514 1514 1514 151	Reading Bates. Redring Inds. Resves Bros. Reichheid Chem Reliance Group Republic Stoel. Rep DI Texas. Resch Cottroll. Revoo (DSI. Revoo (D	101s 101s 101s 101s 101s 101s 101s 101s	Utd Tephnolgs Utd Telecomm Upjohn VF Varien Amocs. Vernitron Viginia EP Vulcan Matris. Welker (Hm/C. Wallace Murra Wat-Mart Store Warner-Comme Warner-Lambt Washington Pc Waste Mangt. Wels Ferge W. Point Peppl. Western Alrime Wes	11	34 76612 124787 TB 447612 147612 14 14
	Chrysler	81s 84 5812 5812 6014 6054 6212 6054 4212 8254 4212 8534 73 73 73 73 73 73 73 73 73 73 73 73 73 7	Gen Tire. Genuine Parts. Georgie Pac. Geoscurce Gerber Prod. Cetty Dil. Giddings Lewis Dilletto Global Marine. Goodrich (BP). Goodyear Tire. Geuld Grace Crainger (WW).	2014 412 414 412 2656 884 8812 8614 8812 8814 8814 8814 8814 8814 8814 8814 8814 8814 8814 8814 8814 8814 8814 8814 8814 8814 8814 8814 8814 8814 8814 8814 8814 8814 8814 8814 8814 8814 8814	McDonald's		Russell Stw	151s 151s 251s 263s 263s 263s 271s 271s 271s 271s 271s 271s 271s 271	Whirtpool White Consolid White Metor Whittaker Williams Co Winn-olxie Str. Winnebege Winn-olxie Str. Winnebege Wise Eleo Pow Woolwerth Wrigley Wyly Xerox Yellew Frt Sys Zapata Zenith Rad	2134 21 264 26 476 4 9956 25 1534 15 3772 1	58 18 18 18 18 18 18 18 18 18 18 18 18 18
	Aug. 22		18 Aug. Aug. 15	1980 High Low 989.72 759.13	Since Cmpil't'n High Low 1651,76 41,22	AUSTRALIA Sydney All IIrd	I. (1988/89) S78.01: 87	18 21 81 82 84 874.00 951	Nigh 5.48 974.05 (21/8)	Low 780,90 (2/11	-
	einqustr'ie 958,18 H'mc B'nde 89.27		9,85,948.85,968,72 8,45,70.14,70.24	968.72 759.16 [15/6] (21/4) 76,81 65.07 (25/6) (28/6)	(11/18) (21/182)	Metal & Minris	. (1628/591,9350.10 652	1,09 6295,29 6241	8,32 _[6680,85 (14/2)	4581,26 (29/5) 65,58 (19/6)	- :

Dow off 1.71 at mid-session

At 1 pm, the Dow Jones Indus-trial Average had fallen 1.71 to 956.48 while the two sub-indices, Transport, Utilities, were off 2.91 and 0.19 respectively. The NYSE All Common Index was off 28 cents at \$72.19, while the Standard and Poors Composite had eased 0.58 to 125.44. Declipos led advances by a retio of more than three-to-two. Trading

Analysts said investors were nerrow margin.

coocerned about the possibility Among Oil

man Kodak, \$1; firmer at \$66.

McIntyre Mines rose \$5; to \$83 of 0.06 at 399.12, while the Composite index of 0.03 to 372.50.

Superior Oil's 54 per cent interest io McIntyre Mines for \$110 a share.

Brascan also

Abitibi 811 21
Agnico Eagle 1354 1514
Aicon Alumn. 5914 3814
Aigoma Stael 413 4154
Asbestos. 31 414
2k Montrasi 2912 29
2k Hova Scatie 3224 3248
Basic Resources 1713 1714

Nudson Bay Mng. | 30 | 281a Hudson's Bay | 271b | 2634 do. Ilil 2 Gaz | 381a | 3714 Husky Dil. | 187a | 12 Inesco | 25 | 20 Imp Oil A | 431a | 4914 Inco | 2714 | 271a Indal. | 151b | 1514 Interpr Pipe | 1814 | 181a

AUG AU2.

CANADA

Stock

American Exchange was Gulf Canada, off \$1 to \$263, fullowed by Inter-City Gas, np \$1 to \$17].

Canada

Continuing Friday's trend, markets were mixed early yesterday in modorate trading, with than three-to-two. Tradiog volume was 24.01m shares (43m).

Analysis and advances leading declines by a

Analyses said investors were nerrow margin.

Among Oil and Gas stocks of a rift developing between the Federal Resorve Bosrd and the Carter Administration over economic policy as the election approaches.

Analyses said investors were nerrow margin.

Among Oil and Gas stocks of Canada at C\$30; and Hodson's Bay Oil at C\$37; were each off C\$1 while Bow Valley ruse C\$1 to C\$24, and Imperial Oil "A" C\$2 to C\$43;.

Silo a share.

Brascen also effered to huy Superior's steke in Falconbridge Nickel mines. However, Superior said it was not interested in selling its Canadian assets.

Superior added \$\frac{1}{2}\$ to \$180\frac{1}{2}\$.

THE AMERICAN SE Market Value Index rose 0.42 to 332.57, with advances marginally ahead of declines. Trading was active.

Dome Petroloum gained \$\frac{1}{2}\$ to \$

CONTINUING THE treed late \$75\forall. Japanese National Oil led Energy stocks higher in lete The All Ordinaries Index fell of Friday, stocks on Wall Street agreed to lend Dome \$400m for trading. Machinery makers such 4.50 to 973.91.

as Yashica recorded gaips, but Non-ferrous Metals declined under profit-taking.

At 1 pm, the Dow Jones Indus
The most active issue on the under profit-taking.

Gold shares closed slightly

Germany

Share prices recoded across a broad front yesterdey in light

Sellars outnumbered buyors on the thin market, causing some sharp drope and plunging the Commorzbank Index to 726.9 from Friday's 732.8.

Tradors said that there were no special fectors behind the drop, other than a month-end rise in call money rates. They did not think the fundamentally positive outlook for stocks had been reversed.

Active ATT lost S₂ to \$533.

Active ATT lost S₃ to \$533.

Golde were lower as Dome Banks took some of the Mines dropped CS1 to CS128 and sharpeet drops, with Deutsebe ture its Bell system.

Oil "A" CS2 to CS235.

Golde were lower as Dome Banks took some of the Sharpeet drops, with Deutsebe Campbell Red Lake CS1 to Bank down DM 3.50, Commerzed CS673. Tesoro Petrolcum easad \$1½ in active trading. It said last week it is not for sale.

Mobil eased \$½ to \$71½ in Falconbridge Nickel for C\$132 e heavy trading. Last week it re-

Mobil eased \$\frac{1}{2}\$ to \$\frac{1}{2}\$ in heavy trading. Last week it reported disappointing results in its latest tests of a well off Newfoundland.

Among other ective stocks and Minerals sub-index was up the Sony, up \$\frac{1}{2}\$ to \$12\frac{1}{2}\$, Sears Roebnek, off \$\frac{1}{2}\$ to \$17\frac{1}{2}\$, interNorth, off \$\frac{1}{2}\$ et \$31\frac{1}{2}\$, and Eastman Kodak, \$\frac{1}{2}\$ firmer at \$66\$.

Heavy trading. Last week it restained in McIntyre Mines for C\$132 et share and in McIntyre Mines for C\$132 et share and in McIntyre Mines for C\$100 off eignificantly were Metals Companies. Precious metals trader Degussa shed DM 5.00 and Metallgesellschaft, a non-forrous metals company, slipped DM 4.90.

10 Also off eignificantly were Metals Companies. Precious metals trader Degussa shed DM 5.00 and Metallgesellschaft, a non-forrous metals company, slipped DM 4.90.

11 Autes, Daimler dropped DM 1.00 and VW DM 0.50.

DM 0.50.

Domestic bond prices were or large speculative, bullish positions was under way end cited it es a major ceuse for the market drop.

In the Income.

Gold shares closed slightly firmer in moderate trading with the London closure inhibiting activity slightly.

Heavyweights were np to 50 cents firmer while Medium and Lightweights gained between about five and 50 cents but a few issues eased against the Trans. the trend. Mining Financials wore mixed and Do Beers oascd 10 cents to R11.60, while Platinums firmed, and Coppers

essed. Industrials closed steady to firmer in quiet trading.

Hong Kong stock market was closed yesterday for a holiday.

Milan

Heavy selling pressure sent Milan stock prices plummeting yesterday in a continuation of last Friday's sharp downwerd trend. The Banca Comm. Ital Index fell 3.72 to 119.23.

Sales were focused on Insurance and Bank issues, which bad been the big gainers of the last week. Other sectors weakened in their wake.

In the absence of interventions by banks and holding

groups, brokers said e retreat of large speculative, bullish posi-

BELGIUM (continued)	HOLLAND	AUSTRALIA	JAPAN (continued)
Aug. 25 Frs	Aug. 25 Price + e	Aug. 25 Augt \$ -	Aug, 23 Price + er
Patrofine 4,980 +30	Fis	- AHZ Group 4,25 -0.08	
Royale Seige 0.710	ACF Helding 73.80	Acrow Aust 1.13 +0.65	Kumagai 456 +1
Soc Gen Bang 2,445	AKZD 92.40 -0.1	e Ampol Pet 1.43 +0.03	Lion
Soc Gen Beige	AMEY 88.90 +0.		Makita
	8redero Cort 184.0 -2	Aust Cons Ind 2.16 -0.02 Aust Guerant 1.50 -0.02	Merudal 312
Vieille Ment 1,288 -12	BOS KAND 20.0 -u.	6 Aust Nat Inds 3.00 [Marul
VIOLITO MOTIL S 2,2007 -21	- Caland Hidgs, 24.40	Bank HSW 3,05 -0,05	M'ta Elec Works. 593
DENMARK	Elsevier	Bond Hidgs., 2.60 + D.16	M bishi Corp 700 -0
L. M.	01-1 0-1-1-1- 1 00 101 O	21'ville Copper;; 2.32 -0.06	M'bishi Ri Est 428 +1
Aug, 25 Price + e	Helneken 05,50 -0,	Briden Oll 4.90 +0.18	Mitaul Co 415 -4
Andelsbanken 102	Hunter Touglas. 15.90 +D.	BHP15,60 -0,40	
Baltice Skand 345 +10	KLM 25,50 +0.	CRA 5.30 +0,10	HCK Insulators 469 —2
COD HANDNINNK-11UB	Nat Ned Cert 116.60 +IL	Cariton & Utd 1.88) +0.01	Hippon Cakki 715 -4
Danske Bank. 107.3	Ned Cred Bank 57.70 -0.	in Cluff Dil (Aust.) 0.59 —0.81	Hippon Oll
Finansbanken 147,50	Heditoyd	Do. Opta, 0,20	Hippon Shinpan, 675 +5
Ferende Bry22, 252 +2 Ferende Dampek 183.3 +0.	OGEM 8.70 -0.	n Coles (G.J.) 2,28 +0.03	
GNT HId2 162,5	Ommeren (Van), 28,70 +U,	Cons Gold 9.40	Nissan Metor 652 +2
Novo Ind	Phillips	0 Costain 3,25	Hizshin Steel 145 -3
Privetbenken 113.78: -0.	Rijn-Scheldo 49.0 +0.1 5 Robeco	G. D-Carrier Military 2000	NYK 305 +4
Provinsbenken108.5 emidth (FL)240	Rolingo	Elder Smith CM .: 3 12 +0.02	Пlympus
S Serendsen 398 +6	Rorente	Cen Prop Trust. 1.46	Pioneer2,170 +10
E-19erfo6 [112	- 2levenburg's 214.50 d + D.	Hertogen Energy 5.60 +0.18	Ricoh
FRANCE	Unilevor 121,9 -1.	BILL AUST 6.40	Sappore 237
Aug. 25 Price + 0	Viking Res 105.6 -1.1 VMF-3tork	e Jennings 1.06 +0.01	13harp
Fre	VNU	1 10000 (0)	Shiseido
Emprunt 4% 1973 2,550 -46 Emprunt 7% 1976 8,606 -5	West Utr Bank 257,0 -6	Lennerd Oil 1.35	Stanley 448
CHE 59 5.703 -5		Meekatharra Ms. 6.70 -0.10	Teihcl Oengyo 73515
Afrique Occid 414,00 + 2, Air Liquide 455 Aquitaine 1,180 —8 Au Printemps 110,00 + 0,	ITALI	Meridian Dil 0.29 +0.01 Metramar Min 0.45 +0.05	Taighe Pharm 555
Aquitaine		Menarch Pot 0.78 -0.05 Myer Emp	TDK
BIC 593 +4	Ure —		Telkola Oll 1 050
Seng Rothschild 152.50 +2.1 Bouyques	ANIC	. Nicholas Int 1.32 -0.86	TBs 530
Bouygues 664 -7 BSN Gervals 1,030 +2 Carrefour 1,888xr +9	Bance Com le 19,900; 50	0 Nekbridge 4.14 -0.01	
Club Mediter 396.00 +1.5	CONTINUE	0 Pancon 7,20 -0.18	Tokyo Sanyo 550 +32
CSF (Thomson) 460 +3	Flet, 1,599 -41	Pan Pacific 0.32 +0.81 Plenear Conc. 9.32 -0.81	Tekye Corp 225 +1
Cle Gen Eaux 363.50 +4 Cle Gen Eaux 466.0 +2.	Finsider	Queen Marg't G 0,48 4 Rookitt & Coln 6,48 0.05	TDTD
CCF	[Italcomenti25,790 61	0 Santos 13.90 -0.10	(Victor(1,890 / -10
Creusot Loire 75.9 -0.	Mentedison 147! -3	Southland M'n'g 0.35	Wacoal
OKEL	Pirel Co 2,540; +18		Yamazaki 550 -9
Ferode 557 . +B	Pirelii 2p A 850 -15 6nie Viscosa 765 +14	Tooth 1.97 +0.07 Utan Mining 5.38 -0.62	Voke town Reige 520
Gen. Occidental . 325 +1 Imetal	do. do. Priv. 505	9 Weltons 0.76 +0.01	
Lafarge	de Pref	Western Mining. 5.14 -0.63 Woodelde Petrol. 3.12 -0.00	
11 530 /		Woolwortns 1.77 +0.05 Wermaid In11 4.20	Aug. 25 Price + er
Machines 8ull	NORWAY		Boustead Bhd 4.40 +0.04
Most-Nennessy 55B +22	Aug. 93 Price + er	HONG KONG	Cold Storage 5.72 +0.04 IBS +0.05
Paribas 960.6 -0.3	Kroner -	Aug. 92 Price + er	Fraser & Neave 5.95 -0.05
Pernot Ricard 338.00 -3 F	Borregaard 72 -0,6		Inchcape 8hd 3.85 Malay Banking 14,40 +0.38
Perrier 215.0xr + 5.1 Peugeot-Cit 207.00 + 1.2 Poclein 226 + 1 Radiotech 305	117.5	Cosme Prop 2,2 70,10	Melay Braw 3.50
Poclein	Norsk Nydro 570	Easth Asia Nav., 5.50 +0.05	Pan Elcet 2,33 ÷0,06
Redoutc 453 -B	Storebrand 122	Us - Case Press 146	6ime Oarby 3.80
Roussel-Dolaf 288 (X) +2 9	3	HK Kowloon Wh. 91 +3 HK Land. 13.60	JD8 4.38 -0.02
St-Gebain,	15112521	1 HK 3hanohai BK.; 18.5U +0.20	SOUTH AFRICA
Telemech Elect. 870 +7	Aug. 55 Price + er		Aug. 65 Price +er
Thomsen Brandt 236.B +3.5	·	New World Dev. 6.10 +0.75 Il seas Truel 8k. 7.03 -0.05	Rand -
GERMANY	AGA	CUK D-000 . 18 30 +0 %	Abercem
Price + or	Atlas Copco 63	Wheel'k Merd A 0.60 +0.05	
Aug. 95 Ilm. —	Geliulosa	Wheel K MERITI 6; 5.20, -0.05	Angle Am. Co 19.00' -0.18 Angle Am. Gold 112 -6.5 Barlow Rand 11.80 -0.18
AEG-Telef	Electrolux 82.5m -0.5 Ericason 85.5 +0.5		CNA invests 5.50
	Esselte 171 -3	Aug. 85 Price + er	Currie Finance 2.33 +0.05 Do Beers
Bayor-Hypo 254 -0.5	Fagersta 81 : -1	Yen -	East Drie 32 +0.26
BAYER	Mo och Dom 105	Allnemoto 581 -1	FS Ceduld
2MW 158 -1	Sandvik	Asahi Class 432 -1	Highwold Steel 5.50 —0.45 Huletts 7.60
8rown Bovoil 308xr —1 Commerzbank 170 —2.3	8kandle	Ganon 640 +1	Nechank 6.80 +0.05
Conti Gummi 50.4	5KF	Dalel 735 +3	OK Bazears 19.75 Pretea Hidgs 3.85 ÷0.18
Demag 2485	Svon Nandelsbn . 72	IDKBI 402	Rembran1 7.50 -0.10
D'scho Babcock. 194 -2.3	Uddeholm 51 -2	Dalwa House 355 -1	Rennies
Doutsche Bank 286.0 3.0 DU Schult 163.5 0.6	Volva 54.5; +0.5	Ebera 400 -5	Sage Hidgs
Dresdnor Bank 194.0 -1.5 Oyck Zoment 143 -0.5		Elsai. 1.040 720 Fu]i Bank 418	Smith CG Sugar. 17.65
GHH 215.6 -2.5	SWITZERLAND	Fuji Film	TigerOats 10,800,20
Hapag Lloyd 73	. Aug. 25 Price -	Fulitsu Fanuc 2,970 -70	Unisco 2,45
Hoesch 24.2	Frs.	Hasegewe 515 -4	Financial Rand US\$0.82
Horzmann (P) 387 -0.5 Horten 142.8 +0.3	Alusuisso	Hoiwa RI East 603 +13 Hitachi	(Discount of 374%)

Aug. Aug. 81	Aug A	ug. A 19	18 4	g	HI2h	·Low	High	Low
einquetr'ie 958, 18 955,05 9 H'mc B'nde 89,27 69,40	_		8.88 966 6.14 76		68.72 [15/8] 76.81	759.18 (21/4) 68.07	1651,76 (11/75)	41,22 (2/7/62)
Transport . 327.78 324.83 3 Utilities 111.28 111.01	20.39 3,1	7,05 31	7,58 32	1.65 0 1.05	(23/6) 27.73 22/6/) 18.88	(28/5) 253,59 (27/5) 96,04	524_95 (21/8/80) 185.32	10.52
TradingVol 000'st 58,210 50,770 4		- [- 1	- (ris)	(21 (3)	(2014/63)	-
Day's high 969.45 low		<u> </u>				<u>. :</u>		
Ind. div. yield %		g, 18	Au;	2.8 64		28	Year ago (
STANDARD AND POORS	1			٠.	1 1	280	Since C	mpli't'n
Aug. Aug. 22 21	20	19	Aug. 18	15	High	_'	High	Low
:Indust'ls 145.28 142.61	140,58	189.12	140.05	142,88	140.29	111.0	(15/8189)	(58/8/52
Composite 125.02 125.48	125.77	122,60	125.58	125,72	126 C	2 68.2	2 125.85	4.40 (1/6/62)
	Aug	. 20	Aug.	15	Aug.	6 Y	ear ago (approx.
ind. div. yield %	4.7	72	4.7	5	4,81	<u> </u>	4,28	•
Ind. P/E Ratio	8.	35	8,3	52	8,12	<u>. -</u>	8,49	
Long Gov. Bond Yield	11_	10	10.6	7.	10.7	_	8,96	
NYSE ALL COMMON							ses and Fa 2 Aug. 21	
Aug. Aug. Aug Aug 28 21 80 19	High		Rise	es Tra	ded	1,812 1,002 538		1,905 893 511
72,47,72,07,71,01,70,32	72.47 (22/8)	55.30 (27/8)	Une			378	340 120 0	401 49 1

MONTREAL

TORONTO Composite 2271.7 2278.7 2248.4 2265.8 2271.7 (22.6) 1792.6 2/12	Swiss BankCpn.(51/12/58), \$18.8 \$12.8 \$11.2 \$11.8 \$17.0 (11/2) \$79.0 (26/5)
NEW YORK ACTIVE STOCKS Change	WORLD Capital Intl. (11170) 155.9 146.5 159.8 (21.2) 120.5 (27/5) Bass values of all indices are 100 except NYSE A0 Common—50; Standard and Poors—10; and Toronto—1,000; the last named based on 1975. 1 Excluding and

394,22 388,52 425,80 (29/2) 568,08 592,50 578,90 (29/2)

High

Low

	Aug	Aug	Aum	Aven	10	•
	25	Aug.	21	ad`	Nigh	Low
AUSTRALIA Sydney All IIrd. (1968/89) Metal & Minris. (1988/89)	976,61 ,8350,10	978,41 6521,08	974.08 6295.28	965.48 6248,32	974.05 (21/8) 6880.85 (14/2)	780,90 (2/11 4581,26 (28/6)
AUSTRIA Credit Aktien (2/1/62)	67.44	87.25	87,19	67.58	69.40 (7/1)	65,58 (19/6)
BELGIUM Belgian SE (31/12/65)	84.04	94.74	95,01	94.92	195,75 (11/2)	80.14 (61/5)
DENMARK Copenhagen 8E (1/1/75)	65,78	85,68	85,44	85.56	87,20 (12/8)	74,78 (5/5)
FRANCE CAC Ceneral (28/12/81) Ind Tendance (28/12/79)		105,5 114,9		189.4 116.9	117,0 (82,0) 114.8 (22,18)	97.1 (5/1) 85.9 (6/1)
GERMANY FAZ-Aktien (61/12/58) Commerzbank (Dec. 1955	251.70 726.0	255,62 752,8	254.55 788.0	232.58 750,3	258,83 (25/2) 745,2 (25/2)	812,76 (28/5) 867,0 (27/5)
HOLLAND ANP-CBS Ganerol (1970) AHP-CBS Indust. (1970)	85.0 85.4	88,6 95,5				74.8 (27/5) 58.2 (28/5)
HDHG KONG Hang Song Bank (51/7/64)	(c)	1213.62	1195,04	1158,42	1210,52 (22/6)	768.9 (19/6)
ITALY Banca Comm. Ital (1972)	179,23	122,85	125,99	128,25	128,93 (20)8)	85,11 (2/1)
JAPAN Dow Average [16/5/49] Tokyo New 8E (4/1/68/				6873.76 473.89	6827.56 (25/6) 478.65 (25/6)	6475.95 (17/6) 449,81 (10/5)
NORWAY Osio SE (1/1/72)	124,78	125.43	125,47	128,41	144.70 (14/2)	110.12 (26/5)
SINGAPDRE Straits Times (1956)	584,09	694,13	595.87	690.83	595.57 (21/6)	423,75 (6/1)
SOUTH AFRICA Gold (1858) Industrial (1858)	(u) (u1	= }		794.4 010,8	809.1 (\$1/8) 623,5 (21.8)	648.5 (2/7) 485.0 (2/1)
SPAIH Madrid SE (23/12/78)	108,62	195.82	106,221	105,86	196.82 (22/8)	95,76 (13/5)
SWEDEH Jacobson & P. (1/1/58)	852.53	85,28	363.87	367.71	888.98 (8/2)	854,72 (17 ₁ 1)
SWITZERLAND Swiss BankCpn.(31/12/58)	\$15.8 ·	312,4	512,2	311.8	317,0 (11/2)	278,0 (28/6)
WORLD Capital Intl. (1/1/70)	_ :	_	150,9	140,5	150.8 (21/8)	120.5 (27/8)

Steel of Can A		5718	Thomsen Bra
Teck B Texaco Canada Themson News / Toronto Dom Bk	271s 1812 515s	2014 2B16 1B14 59	GERMANY
Transcan Pipe Trans Moto Oil A	2418	24 153	Aug. 95
Utd Siscoe Mine: Walker(HrmfC.H Warrier Res Westooest Trans Waston IG801	2t 31 4,50 131 ₂	2012 31 4.40 1336 2512	AEG-Telef Allienz Vers BASF BAYER Bayor-Hypo Bayer-Verein. 8HF-Bank
AUSTRIA	11		2MW
Aug. 25	Price	+01	D'scho Babco
Creditanstalt Landerbank Perimoser eemperit Steyr Daimlor Veitscher Mag	336 271 107 244	+2 +1 -5	Doutsche Ban DU Schult Dresdnor Ban Oyck Zoment GHH Hapag Lloyd Hocohst
			Hoesch
BELGIUM/LUX	EMBOU	/RG	Kaufhof KHD Kloeckher
Aug. 20	Price Fis.	+01	Krupp Lindo Lufthansa
ARSED	1,215 954 212	+5 +6 +2	MAN Mennesment Mercedes Hig Metaligessell Muench Ruek
E825Electrobel Febrique Nat G8.Inno G8L (8rux L)	3,060 2,370	-25 -20 +10 -12	Rhein West Ele Rosenthal Schering Slemens
Geveert	1,272	+4	Thyssen

Heboken....

Doutsche Bank DU Schult Dresdnor Bank	163.5	-0.6	-
Oyck Zoment GHH: Hapag Lloyd	143 215.6	-0.5 -2,5	S
Hocohst	24.2	-1.2 -0.5	_
Holzmann (P) Horten Kali und Salz	142.8 155.5	+0.3	8 C
Karstadt		-2 -7	c
KHDKloeckner	214.5	-1,5 -0.5	Ě
Krupp	230≈	-0.0	H
Lufthansa	129	-1,4 -6	Į,
Mennesment Mercedee Hig Metailgessell	188 229,8 280	-1,2 +0,3 -4.2	N
Muench Ruek	535	-10	P
Rhein West Elect	172.9	-2.8 -1	5555
Schering	225,2 274,5	-0.8 -3.4	21 8
ThyssenVarta	53.2, 169	+1	5
Verein-West Verkawagen	136.8 873 171,7	-3.2 +1 -0.5	U W
		V.V	Fe

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308 520 594 810 868 436 545 1,140 BRAZIL +3 Iteh (C)... tto-Hem...... tto-Yokede..... Acesile .. JACC2 JAL Jusco Kajima Kee Soap Kashiyama 2,350 | -10 2,350 | -10 420 | +4 520 | -2 310 420 | +4 520 | -2 380 | -2 1,070 | -20 776 | -1 713 | -1 Kikkoman Kirin Kekuyo 30uza Cruz....... 5,00 Uhip PE.......... 7,18 Vale Rio Ooce 10.80 Komatsu F'ift.... Komatsu F'ift.... Konishiroku

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NOTES:—Prices on this page ore so queted on the individual exchanges and are last traded prices. \$0 cellings ouepended, xd Ex dividend, xc Ex scrip issue, xr Ex rights.

+0.15 -0.13 -0.99 -0.04

Manufrance rescue plan threatened Problems

BY DAYID WHITE IN PARIS

emerged in the preparation of a Government-backed rescue plan for Manufrance, the Saint FFr 150m (\$36m) in aid. Etienne-based retail and manu-

Board of Macif, a mutualist being given the principal are proposing to make to SNM insurance group which holds 30 responsibility for pulling It would give this guarantee insurance group which holds 30 per cent of Societe Nouvelle Manufrance (SNM), puts the culties. onus squarely on the abouldars of the Government. An inter- took part in a bid to re-launch The last rescue bid broke down of 1982, and figures for this ministerial committee is due to the company last year, said it over the State's ineistence on year's and next year's losses decide at a meeting with the bad no wish to become perman-further reductions in the work-

KNP hopes

half, exclusive of its paper mill

subsidiary, Okto, amounted to

Fis7.2m (\$3.6m), up from Fis3.4m a year earlier. KNP did not report its earnings inclusive

Turnover was up 23 per cent to Fls560.8m from Fls455.5m a

year ago. The company reported

an operating profit of Fls19.5m

against Fls9.5m in the 1979 first

Fis25 nominal rose to Fis3.16

KNP commented that

expected lower results in ths

second half due to a decline in demand for graphic paper and uncertainty over the develop-

The group said it expected a

1980 net profit of about Fls11m or comparable with the net

These figures exclude the

The 1979 results including

results of Okto, which last year bad losses of Fls35m.

Okto showed a loss of Fls24m.

Rentvalor

maintains

By John Wicks in Zurich

AN UNCHANGED dividend of

SwFr 5 per certificate is an-

nounced for the business year ended June 30 by Rentvalor, the international bond investment

fund affiliated to the Lugano-

was negatively affected by the

revaluation of the Swiss Franc,

particularly in terms of the

based Banca del Gottardo. Net profits amounted to Sw Fr 5.08m (\$3.04m) for the 12-month period, though income

1) ROLLING MILLS

dividend

earnings realised in 1979.

to match

last year

By Our Financial Staff

KONINKLIJKE

from Fls1.50.

ment of prices.

ANOTHER SERIOUS hitch has Manufrance Board tomorrow ently involved. It had wanted force, in addition to more than whether the necessary condi- to help revive Manufrance, but tions can be met for its offer of had neither the means nor the planned.

Macif's withdrawal has been The weekend decision by the Macif said it did not accept local

The insurance group, which

vocation to keep-it going.

However, Macif said that it facturing group, with the widely rumoured after the would still be prepared to announcement by the principal Board's failure a fortnight ago guarantee a loan of FFr 40m, widely rumoured after the would still be prepared to shareholder that it intends to to agree on terms for the latest which the receivers of the prerescue attempt. In a statement, vious Manufrance company, government - controlled. responsibility for pulling It would give this guarantee Manufrance out of its diffi- on condition that the State put It would give this guarantee up sufficient funds, without making unacceptable demands.

400 redundancies already

The Manufrance management has put a revised version of its re-structuring plan to the Government. The plan is unchanged in its basic elementsa division of the group's activities int othree parts-but forecasts for the group's future are more modest.

The plan now aims to pass break-even point in 1983 instead of 1982, and figures for this have been revised upwards.

Building product groups ahead

groops, Monier and Acmil yesterday reported better profits from their Australian activities. Acmil lifted earnings 27 per cent in the year to June, from A\$14.6m to A\$18.6m (US\$ LANDSE PAPIERFABRIEKEN (KNP), the Dutch paper group, said its net profit for the first 21.56m).

Monier was affected by a downturn in results of its U.S. operations and managed to lift group profit only 3.5 per cent in the year to June, from A\$13.3m to A\$13.7m (US\$ 15.87m). But Monier still announced a one for four scrip issue, the third in the past eight years. The dividend is beld at 11 cents a share with a peak **A\$25.3**m

jump in the interest hill from appeared from increased borrowings necessary to meet the expanded husiness in Australia and higher interest rates on U.S.

horrowings.
The directors said that the recession in the U.S. lifted interest rates to unprecedented levels and severely affected two major areas of activity in the U.S.—tha motor industry and the housing industry.

final of 5.5 cents. Shares from Operations in other countries, Wales and Que the scrip issue will participate particularly Japan, Indonesia had started the in the final representing an and Malaysia, made excellent a hnoyant note.

BUILDING product increased return to share- progress. In Australia most of holders of 12.5 per cent. the group's divisions had a Monier lifted its pre-tax record year. The solid performearnings by 18 per cent to a ance of the Australian activities had continued into the current The result was also after a financial year and prospects favourahle. A\$3.75m to A\$6.0m. resulting sales rose 24 per cent to a peak A\$272m.

> Acmil's result lifted earnings per sbare from 12.1 cents to 14.4 cents and the dividend is raised from 5.25 cents to 6.25 cents. The directors said the increased result could be attributed to an excellent performance from those groups associated with the huilding and construction industry, particularly in New South Wales and Queensland. Acmil had started the current year on

Advance by Komplex Kewangan

BY WONG SULONG IN KUALA LUMPUR

KOMPLEX KEWANGAN, the Malay financial and investment group, made a pre-tax profit of 23.7m ringgit (\$11m) for the year ended December 1979, which was 17 per cent better than for the previous financial year.

Mr. Gbafar Baba, the executive chairman, whose name has been recently linked to rumours of a takeover by Malaysian interests of Dunlop Holdings, told the annual meeting that Komplex Kewangan expected the same margin of growth for the current year.

He said most of the group's subsidiaries performed well, with the exception of its main subsidiary, Amanah Saham Mara Berhad, which operates a number of unit trusts for the

Malays. Amanah Saham Mara's pre-tax profit was down from 8.4m ringgit to 8m ringgit. However, another investment subsidiary. Pelaboran Amanah Nasional U.S. dollar. The rise in interest achieved a record pre-tax profit rates also depressed the quotations for bonds in the Rentvalor on 1978.

portfolio.

At the end of 1979-80 a total of nearly 69 per cent of the investment portfolio was in Control of the investment portfolio was in Amanah International Finance. Swiss Franc and DM securities, also reported favourable perand just over 21 per cent in formances, increasing their U.S. dollars.

PLANT&MACHINERY

1) ROLLING MILLS

12.5in x 24in x 21in wide 350 hp Four High Mill

12in x 30in x 25in wide 400 hp Four High Reversing Mill

5in x 12in x 10in wide variable speed Four High Mill

3.5in x Bin x 9in wide variable speed Four High Mill

10in x 16in wide fixed speed Two High Mill

10in x 12in wide fixed speed Two High Mill

6in x 16in x 20in wide Four High Mill

150 x 100 mm x 15 hp Two High Tape Rolling Mill

110 x 100 mm x 10 hp Two High Tape Rolling Mill

2) WIRE FLATTENING AND NARROW STRIP ROLLING MILL

Two stand by RWF 10in x Bin rolls by 75 hp Rolls

Two stand by RWF 10in x Bin rolls by 75 hp Rolls
3) DECOIL AND CUT-TO-LENGTH LINES

1800 mm x 12.5 mm x 25 Ton Coil 2000 mm x 3 mm x 20 Ton Coil 1500 mm x 3 mm x 10 Ton and 15 Ton Coil

920 mm x 5 mm x 10 Ton Coil
920 mm x 5 mm x 10 Ton Coil
920 mm x 2 mm x 2 Ton Coil
300 mm x 1.5 mm x 1 Ton Coil
36in and 48in Sheet Slitters
5) WIRE DRAWING MACHINES
6 Block, In line, variable speed (560 mm dia x 25 hp DC)

9 Block, non-slip cumulative (610 mm dia x 25 hp AC) B Block, non-slip cumulative (560 mm dia x 25 hp AC)

B Block, non-slip cumulative (560 mm dia x 25 hp AC)
6 Block, non-slip cumulative (356 mm dia x 1.5 hp AC)
Horizontal Drawblock variable speed (915 mm dia x 75 hp DC)
Horizontal Drawblock variable speed (456 mm dia x 15 hp DC)
Vertical Drawblock (2) variable speed (610 mm dia x 25 hp DC)
13 and 15 Dle Cone Type & Spooler, 4500 ft/min (2 machines)
9 Die Cone tipe and finishing block, 750 ft/min
6) SHEARS AND GUILLOTINES
1220 mm x 25 mm Cincinatti Plate Shear
510 mm x 16 mm/50 mm x 50 mm FELS 5crap Shear
2.5 m x 3 mm high speed mechanical Guillotine, Keetona

2.5 m x 3 mm high speed mechanical Guillottine, Keetona
2.5 m x 3 mm high speed mechanical Guillottine, Keetona
3 SHEET LEVELLING ROLLS 920, 1150 and 1850 mm wide
4 HYDRAULIC SCRAP BALING PRESS, Fielding and Platt
5 FORGING HAMMER 3 cwt, slide type, Massey
6 AUTOMATIC COLD SAW, non-ferrous. Noble and Lund
7 ROTARY SWAGING MACHINE, 25 mm capacity

12) 28in COLD SAW, Noble and Lund
13) ROD STRAIGHTEN, Cut-to-Length Lines 6 mm and 16 mm
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WEIDEMANN 75 TON TOKKET PRESS CEPACITY 120In quarter inch thick 32-station ROLLING MILL 11In x 11in wide Two High reconditioned HATEBUR PKE 13 COLD FORMING PRESS PRAUTER GEAR HOBBER P250 reconditioned

MEDART BAR PEELER 4in reconditioned
WICKES CRANKSHAFT LATHE MX4 reconditioned
CAZENEUVE LATHE MODEL HB725 28in swing x 40in recond.
MALDEMIE 4-station COLD HEADER QP88 excellent

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200 TON HYDRAULIC PRESSES
200 TON MECHANICAL PRESS Sin stroke, as new

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30 tons, 96in stroka

1000 mm x 3 mm x 10 ton and 1 1000 mm x 2 mm x 5 Ton Coil 750 mm x 3 mm x 5 Ton Coil 400 mm x 3 mm x 2 Ton Coil 40 SLITTING LINES

1220 mm x 3 mm x 5 Ton Coil

per cent and 50 per cent to 5.4m ringgit and 1.8m ringgit. Mr. Ghafar said the Malaysian Both organisations are backed Government was expected to decide within two months the future operations of Malay investments. Currently, there is some rivalry and duplication in the work of Komplex Kewan-

owned investment trust. Both seek to mobilise Malay savings for investment in Malaysian companies as part of the in "Malay-designate Government's policy of achiev- to tha Malay public.

Corporation), the Government-

by powerful politicians of the ruling Umno party, and a possible compromise being discussed is for Komplex Kewangan to retain its 11 unit trusts. but to leave all future unit trust gan, and the Permodalan Nasional (National Equity to Permodalan activities

The rivalry hetween the two organisations is one reason for the Government delaying the in "Malay-designated agencies"

on debt payment at **Korvettes**

KORVETTES, the troubled store chain, failed to start repaying its lenders on Friday, but the Board hopes to solve the problem. Another meeting is scheduled for tomorrow.

The deeply troubled retailer could not deliver \$26m on Friday, the first troubled installment of its agreement to repay in cash a total of \$28m of its \$55m indebtedness. It was thought that the company blamed "technical difficulties" in obtaining required approval from the French currency anthorities.

Over the weekend, however. a company spokesman said that Korvettea "expects clearance from the French Government this week." Kor-vettes is owned by the Agache-Willmot group of France, which specialises in trying to cure sick retailers.

Korvettes would not comment on the talks with its lenders. The lenders include Bankers Trust, Chase Man-hattan Bank, Prudential Life Insurance and Manufacturers

Hanover Trust. The currently delayed repayment can only weaken what little supplier confidence remains. Korvettes, saddled with increasing losses during the past two years, is receiv-ing little if any merchandise at the start of the important back-to-school selling season. Many suppliers will not ship goods to Korvettes until they are sure the group will

Flat quarter at Pioneer

By Our Financial Staff

A MARKED slowdown in the advance of consolidated net income marked the third quarter results of Pioneer Electronic Corporation, Japan's biggest integrated andio equipment maker.

At Y4.22bn (\$18.84m), the rise was less than 3 per cent above the same quarter ended June 30 last year. Sales rose slightly more than 24 per cent to a total of Y66.83bn (\$298m).

Brascan makes offer for McIntyre Mines stake

services, consumer products, ago, and since then have been bridge Nickel, Canada's second and resource group, controlled deploying its cash assets of largest nickel producer. Brasean value of the bid would be around C\$200m (\$180m) since Brascan aaid it would also make the same bid to minority owners of McIntyre.

McIntyre is an old established Canadian mining company, originally based on a valuable Ontario gold mine, and now a major Western coal mining

by the Peter and Edward around C\$500m, mainly from Bronfman interests, has made a compensation after the bid of C\$110 per share for the Brazilian Government take-over 54 per cent interest held in of its power utility in Brazil. McIntyre Mines of Toronto by Brascan has since invested in Superior Oil of Houston, Total Canadian resources, including Brascan has since invested in energy, and has raised its interest in the major Western company, Western mining Mines.

Control of McIntyre was bought by the Keck family of Superior Oil around 10 years ago from the Anglo-American Corporation of South Africa

BRASCAN, the major financial fight with management two years family also controls Falconinterest in Falconbridge.

> In Houston, Superior Oil said a written proposal had been received from Brascan and that Superior had told the Canadian company it was not interested; in selling its Canadian assets. However, Superior said the Brascan bid will be placed on the agenda of its board meeting

dne this week. The Superior group has already proposed amalgamation major Western coal mining group. Besides Canadian of McIntyre and Canadian company.

The Bronfman interests took tion and production firm in to a McIntyre shareholders. over Brascan in a spectacular Western Canada, the Keck meeting shortly.

Hints of bid by Petro-Canada

oil company Petro-Canada may be seeking a foreign-owned Canadian oil company with a view to takeover. Though a large number of companies have been mentioned, including Gulf Canada and Texaco
Canada, the most likely targets
are thought to be Amoco
Canada or Chevron Standard, owned by Standard Oil of Indiana and Standard Oil of

California respectively. Petro-Canada took over Atlantic Richfield Canada in 1975 for C\$450m (US\$300m), and Pacific Petroleums, owned by Phillips Petroleum, in 1978 for more than C\$1.5bn, the largest takeover in Canadian corporate history. It missed out in a bid for Husky Oil Canada when Mr. Robert Blair, president of Alberta Gas Trunk Line -now known as Nova Corporation—moved in quickly, huying large amounts of Husky stock

on the New York stock market.

Husky was owned by the Nielsen family of Cody, Wyoming.

While the Federal Governments's policy is for greater Canadianisation of the oil industry, there are many avenues to achieve this. Texaco Canada, now under more thrustful management, would be costly, and

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Whiteaway Laidlaw ... 16 %
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t1.0 3.5 2.0 20.3 -1 b1.67 8.2 3.0 21.7

+5

94 143

BASE LENDING RATES

A.B.N. Bank 16 % Hambros Bank Allied Irish Bank 16 % Hill Samnel C. Hoare & Co. Hoare & Co

Bank of Credit & Cmce. 16 %
Bank of Cyprus. 16 %
Bank of N.S.W. 16 %
Banque Belge Ltd. 16 %
Banque Belge Ltd. 16 %
Barclays Bank. 16 %
Bremar Holdings Ltd. 17 %
Brit. Bank of Mid. East 16 %
Brown Shipley. 16 %
Canada Perm't Trust. 17 %
Cayzer Ltd. 18 %
Canada Perm't Trust. 17 %
Cayzer Ltd. 18 %
Consolidated Credits. 16 %
Cooperative Bank. 16 %
Cooperative Bank. 16 %
Corinthian Secs. 16 %
Corinthian Secs. 16 %
Eagil Trust Limited. 15 %
First Nat. Fin. Corp. 18 %
First Nat. Secs. Ltd. 19 %
Rohert Fraser 16 %
Greyhound Guaranty. 16 %
Greyhound Guaranty. 16 %
Grindlays Bank. \$16 %
Guinness Mahon. 16 %
Goemand deposits 142%.

EQUITIES

aP Restricted Trans. 352 il Baker Electrice 10p. 11a Charterh'se Petrol'm 90 Energy Capital (12pp 80 it Hall area. 260 if Marinex 10p. 13a it Roife & Noland 10p. 7a iShackicton Petrol. 64 it Utd. Electronic 200

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Renunciation data usually lest day for dealing free of stamp duty. b Figures based on prospectus astimate. § Assumed dividend and yield. B forecast dividend: cover based on provious year's sainlings. F Dividend and yield based on prospectus or other official estimates for 1979. Q Gross. T Figures assumed. Cover allows for conversion of sheres not now ranking for dividend or ranking only for restricted dividends. § Placing price to public. pł Pence aniess etherwiss indicated. ¶ iscued by tender. ¶ Offered to holders of ordinary shares as a "nights." I issued by way of capitalisation. §§ Reintroduced. ¶ issued in connection with reorganization, merger or takcover. ∭ Introduction. ☐ Issued to former Preference holders. M Allotment latters (or fully paid). ● Provisional or pertly-peld ellotment letters. ★ With warrants. † Unitsted security. ‡‡ London Lieting. † Dealioga under special rule.

High | Low

FIXED INTEREST STOCKS

RECENT ISSUES

Amount of High Fow

REPORTS ARE again circulat Gulf Canada, rumoured to be participation in new areas of ing in Calgary that the national for sale shortly after the 1973-74 exploration. Texaco Canada has was going through a rough period has tripled in value since then to sevaral billion in Ontario, with a replacemen value now of nearly Calbu, but bas to spend large sums on its Montreal refinery. dollars because of its successful

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energy crisis when the parent

OFFSHORE & OVERSEAS—contd.

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World Wide Growth Managements 10a, Rodenard Rosel, Linemburg Wren Commonity Trust

Pending dividends

For the convenience of readers the dates when some of the mora important company dividend statements may be expected in the next few weeks ara given in tha following table. The dates shown are thosa of last year's announcements, except where tha forthcoming board meetings (indicated thus*) have been officially published

Oato	Macine 1035	Outo	1110111 1026
SAlley Municu	year	fances Com to	year
*Allen Harvey		LaportaSapt. 21	Int. 3.5
and RoseSept. 11	Int. 10.0	*Law LandSept, 17	Int.0.714
Amal. MetalSept. 20	Int. 3.0	*Lead IndeSept. 10	Int. 37.
*Assoc.		Legel & GenSept. 19	Int. 2.6
OalriesAug. 27	Final 4.3	*LinfoodSept. 3	Finel 8.75
		*LinloodSept. 3 Ldn. Merchant	F4181 15,73
AuroraSept. 18	Int. 1.55	COII. Merchent	
*88AAug. 29	Int. 0.84	SecsSept. 8	Final 0.66 5
aicc	Int. 2.75	*Low &	
85RSept. 12	Int. 1.413	8on#rSept. 15	Int. 3.14
Sebcock Intl. Sept. 12	Int. 3.4	*Morgen	
*Bank of	1112 0.4		1-4 4 2
	A 7 OF	CrucibleSept. 4	Int. 4.5
ScotlandSept. 23	int. 7.25	Northem Eng.	
*Berrow		IndaSept. 7	Int. 1.25
HepbumSept. 16	Int.0.8	Nurdin end	
*8lue Circle Aug. 27	Int. 3.8	PeecockAug. 29	Int. 1.5
aooker .		P. & OSept. S	Int. 3.0
	Int. 5.0		
McConnellSept. 13		OlrexSept. 11	Int. 1.4
*aowaterSept. 8	Int. 4.25	*Pearl AssurAug. 27	Int. S.O
Brit. Elec.		Pearson	
TractionSept. 6	Finel 5.719	LongmanSept. 13	Int. 3.75
*8ritish		Pearson	
PetroleumSept. 4	Int. due		Int. 3.75
		(S.)Sept, 13	III (. 3.75
British VitaSept. 13	In t. 2.4	*Phoenix	
arown Boveri		AssceSept. 3	Int. 5.8
KentSept. 20	Int. 1.429	PertelsSept. 7	int. 4.25
*Cadbury		*Provident	
SchweppesSapt. 4	Int. 0.95	FinancialSept. 2	Int. 2.2
Carpets IntlSept. 10	Int. 1.75	Rensomes Sims &	
Corpets Intra-Sept. 10	1112 1.75		
Collins		JefferiesSept. 17	Int. 3.14
(W.)Sept. 8	Int. 2.086	Prudential Sept. 11	int. 3.5
CosteinSept. 7	Int. 4.0	*RaybackSept. 5	Finel 2.87
Croda Intl Sept. 20	Int. 1.5	Reckitt and	
Oelta MetalSept. 20	Int. 1.82	ColmanSept. 11	Int. 3.5
Expended	(Int. 4.5
	I-1 20	RTZScpt. 19	
MetalSept. 12	int. 2.0	RockwaleSept. 12	Int. 2.33
*Fairclough		Roymtree	
ConstrAug. 26	Int. 1.85	Meckintosh5ept. 18	Int, 2.5
*General		SchiodereSept. 13	Int. 3.0
MiningSapt. 4	Int. 25 cents	Sime BarbyAug. 27	Finel 10 cants
			Int. 4.0
Guerdien Royal	L-1 50	Simon EngSept. 17	Int. 4.0
ExchSeot. 3	Int. 5.0	*Slough	
Guest KeenSept. 20	Int. 5.839	EstatesAug. 27	Int. 0.9
*Guinnees		*Stone-PlattAug. 29	Int. 1.4
PestSept. 11	Final 4.0	Sun AllianceSept. 3	Int. 13.5
Hall EngSept. 28	Int. 3.1	Sun AllianceSept. 3 Tilling (T.) Sept. 12	Int. 3.0
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CeremicScpt. 7		"Tumer and	45
iofinung (S)Aug. 22	Finel 3.007	NewsliSept. 11	Int. 4.5
*HK & Shenghai		Union Con Aug. 28	Int. 2.6
BankAug. 26	Int. HK\$0.24	Union Con Aug. 28	Int. 19 cents
House of		Uld. Siscuits Sept. 17	Int. 1.7
FraserSept, 2	Int. 2.0	*Wagon	
ICI Aug 30			In t. 0.625
ICIAug. 28	Int. 12.0	FinanceAug. 29	
1MIAug. 26	Int. 1.9	Weir GroupSept. 3	Int. 1.863
InvereskSept. 18	Int. 1.0	*Yorkshire	
*Klainwort		ChemicalsAug. 26	Int. 2.395
AsneonSect. 23	Int. 2.5	 Board meeting intima 	ted. † Rights
LedbrokeAug. 27	Int. 5.7	Issue since made. # Tex	tree. § Scrip
LairdSept. 15	Int. 1.7	iseue since made. 1 Fore	ceet.
Talle International Id		MUSE BILLE INEGEL TIOIC	

Public Works Loan Board rates

Effective from Angust 23 Over 5. up to 10 Over 10, up to 15 Over 15, up to 25

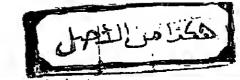
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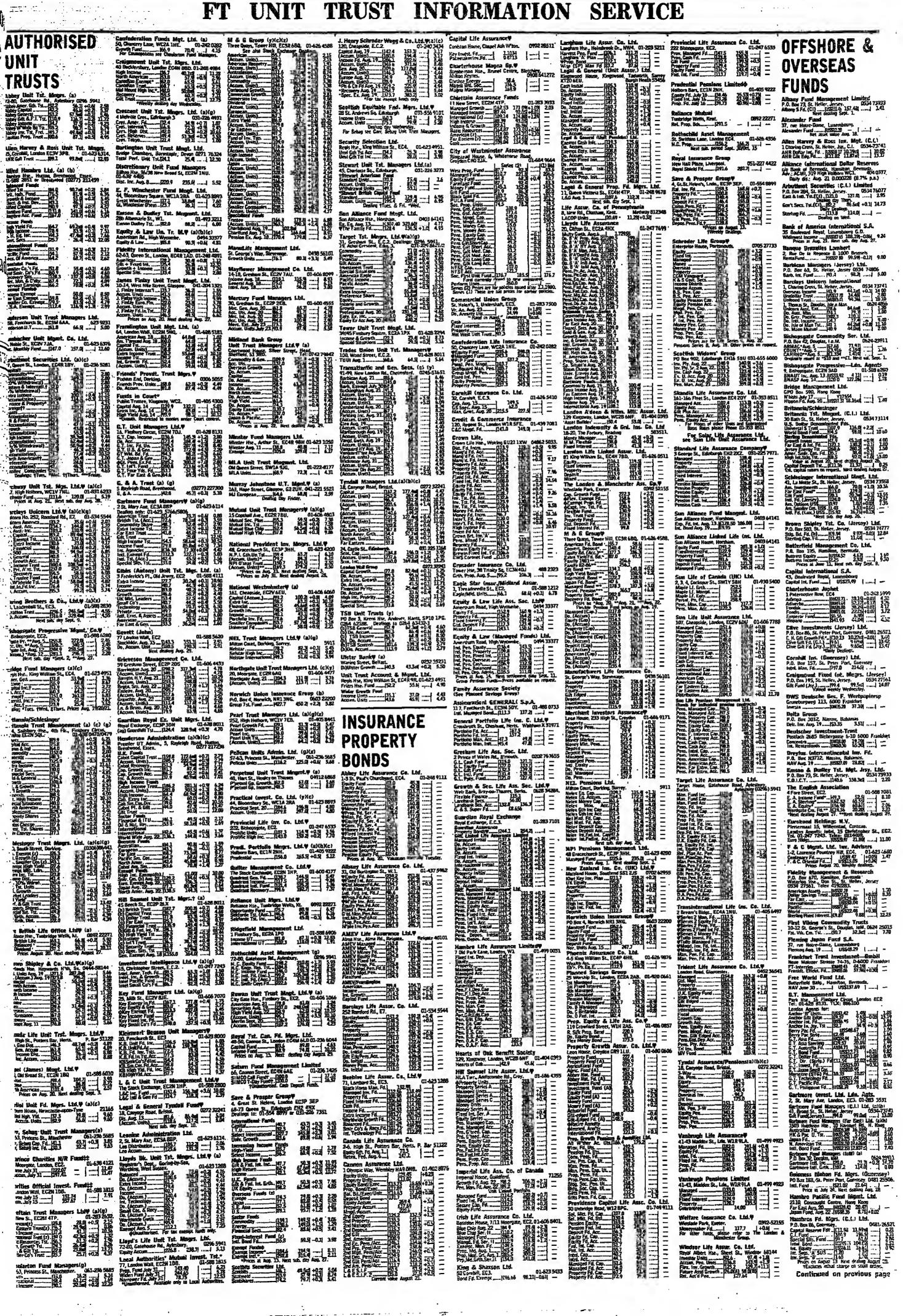
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LOCAL AUTHORITY BOND TABLE

Annual Interest Anthority gross pay- Minimum of interest able sum hond (telephone number in onrentheses) £ Year

Continued on previous page





Mar, Wasson Phip. 10p. 32 141 336 179 334 46

HOTELS AND CATERERS

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HWassely Plus 10p. 232
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June North I M. F. J. Lip. 255
Oct. Queer's Mont 5p. 3601
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Oct. Prince of Wales
Oct. Wales
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Oct. Rynne Hotels 5p. 13
June North I M. F. J. Lip. 136
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Oct. Rownon Notels. 168
Mar. Ryan Hotels 5p. 126
Juny State (Real 10p. 492)
Oct. Trusthouse Forte. 186601
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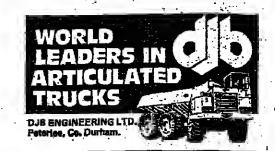
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FINANCIALTIMES

Tuesday August 26 1980



LABOUR TO DEMAND RECALL OF PARLIAMENT

Ministers face jobs fury

MINISTERS are bracing themselves for a furious reaction from Opposition politicians and TUC leaders to the latest unemployment figures to be publisbed tomorrow, demands for the including immediate recall of Parliament.

Publication of the mid-August totals, which are certain to nudge if not pass the emotive 2m mark, will signal the relaunch after the holiday of the political conflict over the Government's economic strategy.

Mr. Michael Foot, Labour Party deputy leader, confirmed yesterday that the Opposition is preparing to mount a cam-paign for the recall of Parliament to discuss what he described as "the most serious iodustrial crisis the country has known for generatious."

Demands for a change in economic strategy to counter uoemployment and to prevent further hankruptcies and liquidations will he echoed and intensified when the TUC meets at Brighton next week.

BY ROBERT MAUTHNER IN PARIS

Cabinet in the secood week of

September, will keep a tight rein oo Government spending. The overall deficit is expected

to be limited to about FFr 30hn

Public expenditure, according

to informed economic observers.

is expected to increase by about

13 per cent to about FFr 610bn,

hut given a similar rate of infa-

tion this will represent no rise

The Budget deficit, likely to

be one of the smallest of any

Western lodustrialised country, compares with an estimated

(ahout £3hn).

of nervousoess in Whitehall over the level of unemployment there is no sign of a dent io the Government's determination to press ahead with its econostrategy. The views of Mrs. Thatcher, who spent the Bank Holiday at Chequers after returning from a brief holiday in Switzerland, ware expressed by Mr. Angus Maude, Paymaster

General.
Mr. Maude, who is charged with explaining and defending optimism and argued there was Government policies, insisted on BBC radio that current econthe tunnel. "We are slithering omic polices were sound and there was oo real alternative. He said inflation was beginning to come under control and he forecast that the trough of the re-cessioo might he reached to lotroduce measures to deal around the turn of the year.

"We have got to stick to our guns because otherwise the final tries, but these warnings had situation will he infinitely worse been hrushed aside. than it is now . . we were elected to get the economy right and this hard period for us all now is an inevitable price that has to he paid to do that," Government stuck to its policies

Budget deficit originally ac-

Economic considerations are

nouoced last October, and that device. deficit targets have always been Given

France to curb public spending

THE FRENCH draft Budget for nificant, however, that this is was finally adopted at the vious years, when fiscal locen-1981, due to be examined by the some FFr 9bo more than the beginning of this year, thanks tives were given only to those Cabinet in the second week of Budget deficit originally as only to a special constitutional companies which increased

overshot in practice in the past conteot with the Governmeot's

not the only ones behind the spring M. Barre is not expected iosistance of M. Raymond Barre. to Increase the income tax

the Prime Minister, on curhing hurdeo. Tax bands are likely to

public spending, except for he adjusted to take account of defence, the police, and research and development.

The Government clearly is ment is credited with the inten-

anxious to avoid repeating last tion of giving some incentives year, when its refusal to make spending cuts demanded by the ing companies to deduct a cer-

Gaullists prevented it for talo perceotage of their several months from winning investment speeding from their

There will be intense relief in Whitehall if the 2m unemploy-ment total is not breached this month. An anticipated drop in the coming weeks could spare the Government this major political emharrassment until after the party conference season and the return of Parliament at the end of October.

Mr. Foot, also interviewed on BBC radio, rejected Mr. Maude's into an industrial catastrophe greater than anything we have seen since the end of the war," with the unemployment crisis and to protect essential indus-

Mr. Roy Hattersley, former Prices Secretary, commented at Government stuck to its policies Thatcher is a long way from the depression in Britain would making any U-turn." he added.

only to a special coostitutional

Given the widespread dis-

economic policies and that a presidential election is due next

to Increase the income tax

ment is credited with the inten-

several months from winning investment speeding from their parliamentary approval for its from the profits.

The measure, if adopted, will bring io ao estimated additionance Bill. The 1980 Budget As distinct from the two pre-

perceotage of their



Mr. Angus Maude-We have got to stick to our guns."

deepen. "My fear is that Mrs.

their investments, the measures

in the 1981 Budget will apply

Another Important proposal which the Government is

reported to bave iocorporated

In the draft Budget is to tighteo

the fiscal net around oil com-

panies operating in France. The

Government is boping to defuse

Left-wiog Opposition criticism

of huge profits made hy oil com-

panies recently, by abolishing several tax loopholes from which the companies have

benefited so far.

to all iovestment expenditure.

next oil licences begin

BY RAY DAFTER

ENREGY Department minlsters and officials have hegun planing the next batch of otl concessions-within weeks of receiving applications for the seventh round of offshore

Energy Department officials

And it seems the Departblocks of their own choosing. This follows the success of the

All the oil groups have agreed to pay fom for the right to drill on these self-nominated blocks. This is an innovation in the UK licensing system which could result in up to £200m being raised for the Treasury.

A record 125 applications

In spite of the response, the Government is still confi-dent that it will be ready to award ilcences by the end of the year. This should enable companies to begin Initial exploration work next year.

round applications was the

In the past, the work programmes agreed between companies and the Government have stipulated that only one or two obligatory wells should be drilled.

Plans for

said yesterday that plans for the eighth round were at a "preliminary stage." Never-theless, the importance of maintaining a higher exploration momentum was appre-

ment may again offer the industry a chance to hid for seventh round offer, which resulted in 40 blocks heing nominated by offshore con-

"In considering arrange-ments for the eighth round. the Government will he mindful of the response to the invitatioo for seventh round nominated hlocks," the Energy Department said.

for 95 blocks were made by 204 companies under the terms of the seventh round offer. Fifty-five of the blocks applied for were designated hy the Government in the normal way,

One fcature of the seventh willingness of companies to drill a number of exploratory wells on each block.

Io a bid to find favour with the Energy Department, many woold be willing to drill three or four wells per block, even if the initial exploration work proved discouraging.

Such drilling programmes are likely to increase the offshore industry's scramble for spare drilling rigs. There are now very few idle jack-up or semi-submersible risg in the world, given the general increasing pace in exploration

work. However, the UK Offshore Operators Association has told the Government that in order to maintain British oil self-sufficiency into the 1990s the industry will have to sink an average of 65 to 90 cxploration wells on the UK Continental Shelf each year.

It fears that leapfrogging

company this autumn could

add £12m to wage costs if the arbitration award of £1,000 for

each journalist plus 12.5 per

that the company, which has already horrowed some £18m

this year from the parent Thomson Organisation, simply

cannot afford to pay the award.

tained a 12-strong picket line

outside the newspaper offices

The journalists, who main-

The management has warned

cent were accepted.

first meetioned it.

union elections.

easts-saw the speech in full.

The country's leading newspapers excised any reference

to the strikes or to trade

About 40 per cent of

transmissions from

Czechs can also receive tele-

Austria and West Germany.

union elections, bowever.

THE LEX COLUMN The reluctant

voyagers

The strength of sterling and the high returns available on UK securities have been a major disincentive to portfolio investmeot overseas since British exchange controls were removed last autumn. Last week, an informal survey of 25 leading fund management groups sug-gested that most of them had heen much less aggressive in huying overseas securities than the official statistics would ingrowing degree of twitchiness among fund managers about the level of sterling. The national figures show that the insurance companies and pension funds lifted their invest-

rise in U.S. rates bad no parment in overseas securities from ticular adverse effect, oo the just over £200m in the fourth sterling exchange rate earlier quarter of 1979 to above £300m in the first three months of this year. As a proportion of the total new funds devoted to this year, since there was then a sharp contrast between the apparently tight grip which the UK authorities had over their equities, this represented an infinancial policy, and the visible chaos in the U.S. It is now less crease from 31 to 43 per cent. But most of the hig groups surveyed say that they increased easy to feel complacent about the state of affairs in the UK. their exposure only modestly, if at all. Their caution was well rewarded. The FT Actuaries All-Share Index produced an overall rate of return of 21 per

Oil prices

In addition, the pound—almost like the share prices of a North Sea oil production company-seemed throughout 1979 to he highly geared to increases in the oil price. Now that the oil price is softer, for the moment at least, sterling looks Against this, an investment in less attractive. Fund managers have a fuzzy

posite Index returned the sterling equivalent of only 24 per cent over the same period. sort of recognition that foreigners have a different view of things. From outside the UK. even with a flat oil price, Japan. the world's secood most important stock market, returned about 61 per cent. Britain is seen as a stable coun-There were bigger gains to be made in places like Australia try, well protected against sud-den rises in the cost of energy, and Hong Kong, but these markets have a much smaller and run by a government which still, somehow, retains the aura of fioaocial rectitude, Aod most Underlying these relative performances was the trade-welghted value of sterling, which rose by 6 per cent over international portfolios are underweight in sterling assets. In the loterests of diversifica-tion, the managers of these funds are prepared to huy sterthe six mooths, reinforcing the view that currencies count for liog pretty well irrespective of at least as much as anything price else in international portfolio Bri

British fund managers, though, are beginning to take the view that the returns on foreign securities could outstrip But some fund managers are now a blt worried. They admit that they have all heen wrong those available in the UK from about sterling for at least three now oo. This does not mean years, so they have no great that an enormous surge of overonnaeoce in their own views. seas investment is about to But a geoeral consensus seems hegin. Funds have generally increased the proportion of may start marketing their over-their portfolio which, since exchange controls were in the next few months, but removed, they are prepared to the overall view among fund to he developing that sterling is unlikely to go much higher in the comiog months, and might The reasoning is simple. First, the interest rate differ-

commit to foreign securities. But often the rise has been only

may well be lower - perhaps several points lower - io six months' time, while U.S. rates are beginning to edge up. The

worth the bother, and that anything much above 15 her cant leaves them open to criticism for mismatching assets and liabilities. The U.S. is still over whelmingly the largest home for foreign portfolio invest ments—and many fund mana-gers feel it to ha especially attractive at the moment. But the flow of investment hands to Japan has also heer striking with many portfolios taking a position to the Tokyo market for the first time. Some fund managers point out that U.S. and Japanese companies make on average a much higher return on their equity than their counterparts in the UK, which makes their shares a more attractive proposition in the long term.

The diversification of risk involved in building an inter-national portfolio includes the search for types of securities which are not available in the which are not available in the UK, such as high technology or resource stocks. It perhaps follows from this that a foreign entrepreneur might get a good price for his business by selling shares in the London market. Compare, for example, the price of electrical shares in London and Wall Street.
So far, investment overseas by
UK institutions has been quite.

good news for the London stockbroking community. Although large funds tend to go direct to U.S. brokers to invest in the U.S. (nsually, though into always, through a London branch office), for Japanese and other Far Eastern stocks they are just as likely to go through a London braker. London broker. Most of the hig funds do their owo curreccy evaluation: they do not seem to think it worth paying anyone else to stick a pin in

Foreign bonds

British institutions inferest in foreign bond markets seems to have been very modest. But then for reasons of currence and yield these markets have largely been unattractive in sterling-based investors in the past year or so—the great excep-tion being the short-lived but remarkable bull phase in the vi-

Some of the unit trust groups seas wares more aggressively. (9 in the next few months, but the overall view among find laye managers is that most institutions will maintain a relatively you will probably get crushed

New chief forecaster appointed at Treasury

By Peter Riddell, Economics

A NEW chief forecaster has been appointed at the Treasury to complete the major reorganisation of the work of the department's economists. Mr. Hugh Evans, 39, is moving

up within the Treasury to become responsible next mooth for the new slimmed down and separate group of specialist forecasters. His appointment follows a

review earlier this summer by Prof. Terry Buros, the Treasury's chief economic adviser. This led to the decision to halve the number of economists regularly iovolved in forecasting and to split them from an enlarged group employed in economic policy

These moves are intended to end a period of considerable uncertainty and low morale among after the last election.

Conservative ministers quickly made known their scepticism ahout traditional forecasting techniques. They tried to distance themselves from the projections which the Treasury is legally required to publish, The result was clashes within

the Treasury, notably last November, hefore Prof. Burns' arrival, when the ministers refused to publish the initial forecasts prepared by the Treasury's economists. Instead, revised, and less pessimistic, projections were produced.

The discussions particularly then chief forecaster. He was one of the main architects of the Treasury's large and comand the main defeoder of the iotegrity of established fore-casting techniques. Relations with the political side of the Treasury hecame strained and earlier this year Mr. Shepherd moved over to a senior post on the joint economic side of the Trade and Industry departments. leaving a vacancy for several months.

Mr. Evans has been promoted an under-secretary alongside Mr. Frank Cassell who will remain responsible for policy analysis.

Mr. Evans has been closely tovolved in the preparation of which is made up of party and the Treasury's short-term fore-casts since the mid-1970s, much democratisation of political life of the time as Mr. Shepherd's loside the party. At Sunday's deputy. He has the reputation | Central Committee meeting Mr. of being both open-minded and outgoing, in discussions with noo-Whitehall ecocomists, about economic model-huilding and to he presented to Parliament in forecasting.

Steel users call for energy aid

the severe impact which bigh pressure on prices."

Other EEC Governments proenergy costs are having on the

The British Iron and Steel Consumers' Council, which represents the steelmakers' customers, argues that the West German, French and Belgiao Covernment provide bigher coking coal subsidies, "further massive aids to production and investment in their coal industries" and a more competitive hasis for other evergy

The Council has told the

warned the journalists that the.

and the permaoent closure of the paper and its sister

The next full meeting of the

last Friday—is planned for

Mr. Jake Ecclestone, father

(chairman) of the chapel, said

sent a special appeal for inter-vention to national independent

directors of the company. The

Continued from Page 1

Polish Communist Party itself.

which over the past two years

has produced two reports urging

chaoges in the way lhe country

is run, has again appealed to

the authorities to introduce

Among demands of the group,

Gierek pledged a speed-up of

work on economic management

reforms and the programme is

Future"

reforms.

the autumn.

"Experieoce and the

discussion group,

(formerly Mr. Sidney Greene, posals.

publications.

STEEL consumers have joiced petitors as a result of Govern- the British Independent Steel British steel producers io pro- ment intervections - whether Producers Associatioo, the Electesting to the Government about subsidies, tax or political

vide massive assistance to their coal industries in order to maintain indigenous primary energy supplies without imposing a cost disadvantage on coal users.

"There appears to he no such energy users.

prices into line with those applying abroad. rationale to British Government may be among the issues raised

policies oo coal and other sources of evergy. These impose significant cost disadvantages on steel committee for the first British coking coal and other The British Steel Corporation and private steel producers have

Government that with whatever both protested to the Governform of energy - coking or ment about the impact of high steam coal, electricity, gas or energy prices-a subject which it appears that the UK is hringing increasing complaints from wide sections of

The journalists told the direc-

chapel could produce an agree-

ment which would reconcile the

Officials in the Advisory, Con-

had made clear, they said, that

there were "at least ten ways"

award recommended by inde-

of meeting the 21 per cent pay

ceeding the company's cash

They did not give details of

"cessation of work" at a

number of enterprises, in-

cinding "industrial centres

along the coast," had with each day increased the

The newspaper also re-

leadership which

ported Mr. Glerek as saying

that the purge in the top

resulted in the removal of Mr. Edward Babiuch, the

Prime Minister, and other top-

leaders would open posts to

people who had warned ot

the country's growing econo-

mic problems but had been

to Mr. Glerek's most impor-

tant concession, however, his

agreement to permit indepen-

Izvestia made no reference

material damage to

coontry.

positions of the two sides.

The management of The General Secretary of the NUR)

Times, which is still recovering and Lord Dacre of Glanton from the 11-month 1978-79 (fermerly Mr. Hugh Trevorsuapension of publication, has Roper).

strike could lead to dismissals and the permaoent closure of providing the company and

280-strong chapel—the first Officials in the Advisory, Consince the 117 to 54 strike vote ciliation and Arhitestion Service

yesterday that journalists had pendent arhitration without ex-

appeal was sent in individual the options suggested, but these letters to Lord Robens of Wold- are believed to cover a range of

ingham, Lord Roll of Ipsden, possibilities for phasing in the Lord Greene of Harrow Weald award and productivity pro-

limits.

No sign of Times peace Continued from Page 1

tricity Council has agreed to examine the subsidy arrangemeots which operate on the Continent. BSC, meanwhile, has threatened to start importing all its coking coal unless the National Coal Board briogs its

The impact of energy prices when Mr. Ian MacGregor, chairman of BSC, meets the TUC time on Friday.

Mr. MacGregor will he urged by the union leaders to reprieve the corporation's plant in Consett. County Durham, which is due to close next month with of severe unemployment problenis. BSC has so far shown no competitive disadvantage industry.

sign that it is prepared to against its Continental com-. As a result of demands from reconsider the closure.

On the managements' refusal

per cent pay offer, the journalists said it was not the £115,000

a year that was at stake but

relations hetween executives and journalists, which should he conducted in "a civilised and

They told the directors that

The Times could not survive

without good industrial relations

and that this was "a great deal

more important than winning tactical victories."

The chapel helieves that the

management should honour the

arhitration award which gave

them 11 per cent less than their

But the management has

pointed out that the disputes

results of arbitration are not

Soviet support for concessions

deot candidatures to the

country's trade unions. It said

only that Mr. Gierek had

charged the next congress of

Polish trade unions with adopting decisions oo the

"role, place, and form of activity" of the trade union

The newspaper sald Mr.

Gierek "especially under-scored" in his speech that only a socialist Polaod could

be an independent country

with "stable horders and international authority" and

called on the Polish people

to show "political maturity." Our Foreign Staff adds:

Mr. Gierek's speech was

broadcast live on televisioo in

East Germany, with a simul-

tancous German translation.

organisations.

honourable manner."

original claim.

to improve on its original 18 claims by other unlons in the

Weather UK TODAY

Most parts will be dry with some sunshine. London, E. Anglia,

eotial between sterling and the

dollar is likely to narrow. Short-

term interest rates In the UK

cent in the first half of 1980,

according to calculations by stockbrokers Wood Mackenzie.

while the return oo gilt-edged was 124 per cent.

the Standard and Poors Com-

share of the typical portfolio,

investment.

E. & W. Midlands Dry at first. Hazy sunshine. Thundery showers spreading from south. Max. 23C (73F). S.E. England, Channel Islands, S. Wales Rather cloudy. Outbreaks of thundery rain, with sunny intervals. Max. 23C (73F).

C.N. England, N.E. England Dry, hazy sunshine. Thundery

showers spreading from south.

Max. 23C (73F).

Lake District, Isle of Man. S.W. Scotland, N. Ireland

Dry at first, showers later. Max. 20C (68F). Borders, Edinhnrgh, Aberdeen, Glasgow, Argyll, N.W. Scotland Mostly dry with sunny intervals. Max. 18C (64F).

WORLDWIDE

over the weekend, said that the National Graphical Association had agreed that its members Y'day
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"CC "F|
S 26 79 | Locarno
C 13 85 | Luvor
S 37 99 | Luvor
S 39 84 | Luvor
S 37 99 | Majorca
C 25 77 | Majorca
C 15 58 | Majorca
C 15 58 | Majorca
C 15 61 | Milson
S 15 59 | Mntreal
S 15 59 | Mntreal
S 15 59 | Mntreal
S 17 63 | Najioob
S 17 63 | Najioob
S 17 63 | Najioob
S 17 63 | Nwcstit would only earry out normal working. This meant that they would not accept copy from "unusual sources" should the procedure makes clear that the management attempt to produce a paper without its NUJ But there was a 17-hour delay before Romanian radio The news of the changes in Poland's leadership was reported in all eastern European countries, but, like the USSR, most were silent in Mr. Gierek's promise of free trade East German television viewers-most of whom can receive West Germao broad-

ance companies is that anything you will probably get erus helow 5 per cent of their total to death in the gate. Gartmore Gilt Trust The aim of this new Trust is to provide investors with a high level of income, paid quarterly, together with a measure of long-term capital growth, from a managed portfolio of UK Government Stock (Gilts). Garpnore feel that gilts are attractive at present, since the authorities have held interest rates at high feets and are determined, as a priority, to reduce the level of inflations. We expect interest rates to fall but would point out that investors in the Trust should continue to receive the level of income published at the date of purchase and benefit, in capital terms, from any general reduction in interest rates. Garmiore Gili Trust units are available until 20th August, 1980; at the initial offer price of 25p per unit. You can invest a lump sum of £200 or more, or as little as £25. through the Gartmore Money builder Plan. Please complete and forward the coupon below. Remaind the coupon below. Remainder the prace of their and the income from them can go down in wellow. You should regard your my enterest as being terms. In the should regard your my enterest as the income from them can go down in well-well and repaired as their them the should be accounted by the country of the income in the should be accounted by the should be a d the line live is prefer to a mountain an accordance of the plan VATA. The term are also in the bid describe doors, live are available on release. The term are also bland line is from Largest in located. The term are also bland in the from Largest in located. The term are also lines are former by bright integers Largest above they have Landon ECA MRF. The literature to the large lines of warmers. The other time are also below to make the Republic of Interest.

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